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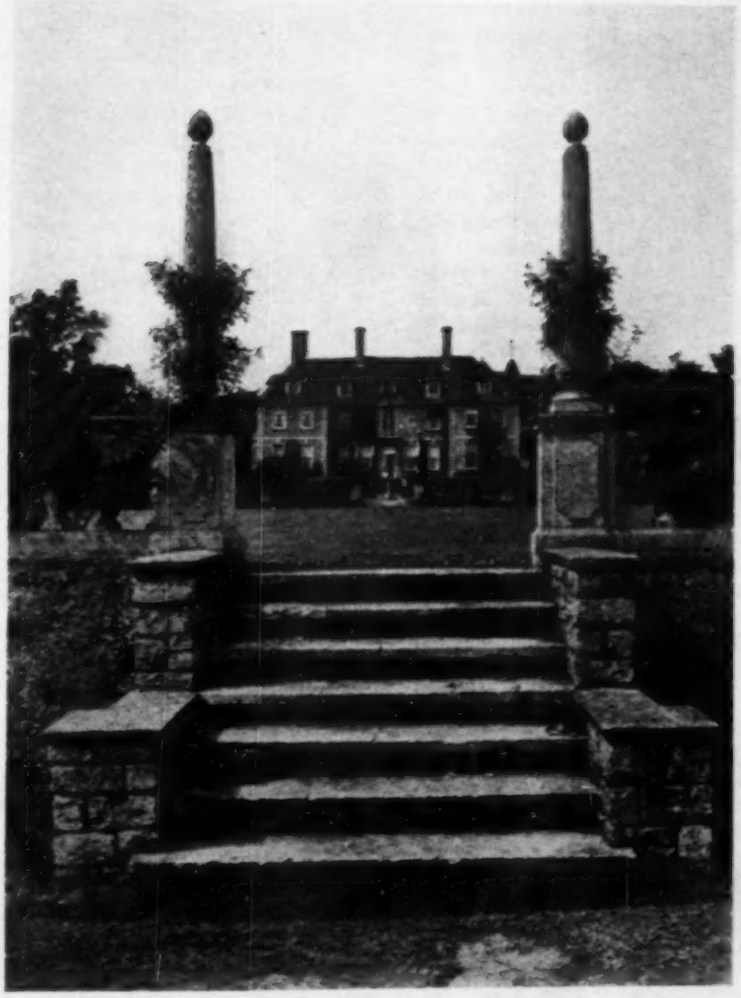


Conkwell Grange, Wiltshire: View from Garden.

MR. E. GUY DAWBER, A.R.A., P.-P.R.I.B.A., Architect.

MEETINGS

FRIDAY, *January* 24.

Institution of Structural Engineers. The "New Underground Railway Offices, St. James's Park—Notes on Foundation and Erection," by Mr. M. J. C. McCarthy. At Birmingham. 6.30 p.m.

SATURDAY, *January* 25.

Architectural Association. Mr. R. Randal Phillips on "The House You Want." 3 p.m.

MONDAY, *January* 27.

Architectural Association. Mr. J. M. Holmes on "Aspects of Contemporary Continental Decoration." 7 p.m.

Royal Society of Arts. Mr. Harold J. L. Wright on "Three Masters of Etchers: Rembrandt, Meryon, Whistler." 8 p.m.

TUESDAY, *January* 28.

National Federation of Building Trades Employers. Annual Dinner. At the Hotel Victoria. 7.15 p.m.

Institution of Civil Engineers. Discussion on "Stable Channels in Alluvium." By Mr. G. Lacey. 6 p.m.

WEDNESDAY, *January* 29.

L.C.C. Central School of Arts and Crafts. Sir Banister Fletcher, P.R.I.B.A., on "Roman Architecture." 6 p.m.

Institution of Civil Engineers. Mr. A. H. Kennard on "Highways and a Survey of Future Developments." 6.30 p.m.

Institution of Electrical Engineers (Scottish Centre). Mr. E. Seddon on "Recent Extensions to Portobello Power Station." At Edinburgh.

THURSDAY, *January* 30.

West Yorkshire Society of Architects. Mrs. E. M. W. B. Hughes on "Scottish Castles." At Leeds. 7 p.m.

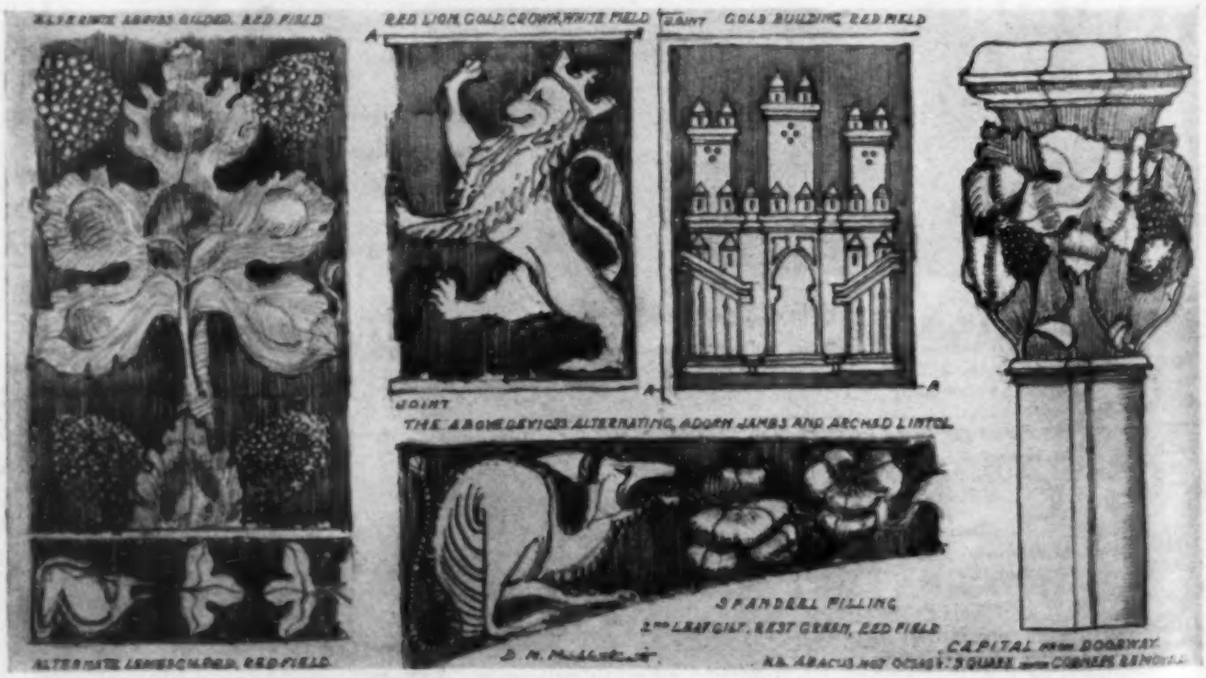
Institution of Welding Engineers. Mr. C. A. Hadley on "Modern Improvements in Electric Resistance Welding Machines." At Birmingham. 7 p.m.

Victoria and Albert Museum. Mr. W. G. Constable on "Canaletto and Eighteenth-century Venetian Landscape." 5.30 p.m.

Institute of Arbitrators. Mr. W. E. Watson on "Defences in Contract." 4 p.m.

Infante's Tomb, Miraflores, Burgos.

San Esteban, from the Castle, Burgos.


RED LION, GOLD CROWN, WHITE FIELD
GOLD BUILDING, RED FIELD
JOINT
THE ARGENT DEVICES ALTERNATING, ADORN JAMBS AND ARCHED LINTOL
SPANDREL FILLING
2nd LEAF GILT, REST GREEN, RED FIELD
D. M. Micklethwaite
CAPITAL from DOORWAY

Details from Doorway to St. Nicholas' Chapel, Burgos.

From sketches by Mr. D. M. Micklethwaite.

(*See page* 210.)

THE ABBEY SACRISTY

THE report of the committee which was invited by the Dean of Westminster to advise on the subject of the proposed new Sacristy at Westminster Abbey has now been published, and we give on another page (226) their unanimous conclusions arrived at after exhaustive inquiry into this somewhat difficult question. In view of the agitation last autumn against the proposal to erect the Sacristy on the north side of the Abbey from Mr. Walter Tapper's design no doubt the Dean and Chapter will find satisfaction in the observations and recommendations of the Committee, for not only is the urgent necessity of the Sacristy emphasised—necessity which some critics presumed to doubt—but they have arrived at the same conclusion of inappropriateness in regard to 12 out of the 14 sites proposed from time to time as the Dean and Chapter, and even as to the site selected by the Dean and Chapter—which is known as the "Model" site, and which was so freely and, we consider, in large part so unfairly criticised—the Committee observe: "It has strong points in its favour. It is accessible from the church by an existing doorway, and it is at a reasonable distance from the high altar. It offers, in the opinion of the surveyor, adequate accommodation for present needs"—observations which, notwithstanding the remarks which follow, are a refreshing commentary on, and corrective to, some of the arguments brought forward against the site, though "the real and widespread reluctance to see any modern building, however excellent, set against any part of the north side of the Abbey Church" is mentioned, as well as "possible legal difficulties." Of the remaining suggestions, the Advisory Committee believe that the best solution of a difficult problem may be found in the Poets' Corner region. It is interesting to observe that this site was considered by the Dean and Chapter with their architect's assistance with great care. "We all desired it," says the Dean, "and tried to convince ourselves that it would do, and it was with great reluctance that we abandoned it as not affording enough room." Aware of this, the Advisory Committee recommend "A combination of the Poets' Corner site with the octagonal crypt of the Chapter House by means of an underground passage stairway." "This scheme, the Committee remark, "would entail cutting through the north wall of the crypt, which is 17 ft. thick," and they are fully conscious of the objection to interfering with ancient masonry, "even when, as in this case, such interference would be practically out of sight," and, we may add, we can imagine the nature of the criticism that would, in all probability, have been directed against the proposal had it been urged by the Dean and Chapter and their architect. However, the Committee feel that perhaps this interference with ancient masonry can be justified by the fact that it would enable one of the most interesting parts of the Abbey, at present almost unknown and unused, to be brought into daily use. In any case, the Dean, with that readiness to consider every suggestion to find the right solution of this question, has undertaken to "go into the question again," with the proposals for additional accommodation which the Advisory Committee suggest.

It will without doubt be cause for much satisfaction should a solution be reached on the lines indicated with the least disturbance of the building, but we may point out that the suggestion of the Advisory Committee is based on the belief that there is no need for a chamber large enough for the marshalling of processions and the robing of clergy and choir, whereas the Dean and Chapter and their architect selected the site on the north side of the Abbey for this larger purpose, and in their judgment all the sites which had been proposed were, from this point of view, unsuitable. We have supported, with some reservations, the "model" site on the assumption that the Dean and Chapter know better than anyone else what the need is, and it may yet be found that their proposal would be the best solution of the problem. A suitable place for housing the objects in the care of the Sacrist is required, and Mr. Tapper's design at least provided this without any interference with ancient masonry; but whether the proposals of the Advisory Committee, which involve cutting through the north wall of the crypt, will provide a suitable Sacristy may be doubted. Outside the door leading into Poets' Corner there is a hoarding, the space behind which, between the buttresses of the outside walls of the chapels, is at present used by the Abbey masons. It could be enclosed and fitted up, we are told, and the blocked-up door which leads from it into the Abbey could be reopened. From this space an underground passage and stairway could lead down into the crypt below the Chapter House, which thus would come back into use and knowledge. More space still, if it were needed, could be obtained by extending underground eastwards. This is the scheme now recommended to the consideration of the Dean and Chapter, with whom alone rest the decision.

If this scheme achieves the end desired, it will be a curious conclusion to the Sacristy controversy that an accomplished architect is to be asked to provide suitable accommodation in a cellar. We may feel sure that in past times a Sacristy would have been provided in a suitable place and in harmony with the surroundings and that the life of the time would have been reflected in the work. A correspondent tells us that "a great deal of exaggerated sentiment paralyses our efforts to day, and that we have no confidence in our own efforts. The whole artistic world is admiring the wonderful results obtained by a distinguished modern architect (who by inheritance and education is steeped in the spirit of Gothic work) in his efforts in building a great Gothic cathedral at Liverpool. This should be encouragement enough for a belief in our own powers." We yield to no one in reverence for, and admiration of, the splendid records of Gothic architecture in this country, but we believe there is too much false sentiment evoked by questions such as this of the Abbey Sacristy. We appear to be standing between two forces: reverence for the past and a hopeful belief in the present, but we ought not to forget that in questions of this kind we should not think entirely of the past, ourselves and the present times, but of future generations; for we may be assured that whatever action is taken now will be viewed very critically and in a different light later on. If we can do nothing better than offer a wholly sentimental reverence for the past we are not being true to ourselves and our own time. Carried to its logical conclusion, a wholly sentimental reverence for ancient buildings in present-day use must lead to the worship of dead art and the prevention of the development of the living art. If the proposals for the Sacristy additions to Westminster Abbey concerned a building not in use, opposition to them might have been justified, but the work of a great church like the Abbey should not be interfered with for want of suitable accommodation, and if it does not exist, it should be provided in a convenient and dignified manner.

NOTES

Official Architecture.

It would be interesting to know what happened when Sir Alex. Grant's munificent donation of £200,000 for new National Library Buildings in Edinburgh was made known. We understood that the Library was to be the subject of open competition, but judging from a report in the *Scotsman* of a meeting of the Trustees of the National Library of Scotland, the work appears to have got into the hands of the Office of Works. Is it reasonable when a private citizen gives large sums for public buildings that such work should go to a Government Department? Cannot the Office of Works justify their existence without undertaking large architectural projects like this? The latest information from Lord President Clyde at a meeting of the Trustees is that "they had heard from the Office of Works that the contract for the demolition of the old Calton Jail had not only been made and the work commenced, but that the discussion and settlement of the plans for the new Sheriff Court House were practically completed, and the preparation of working drawings and the preliminary to a building contract would be undertaken immediately the plans had been considered by the Fine Art Commission and the City Corporation. At this stage it was difficult to give firm dates, but it was hoped that unless unexpected difficulties occurred the new Sheriff Court House might be commenced in the late summer or autumn of 1930, and completed in from two and a half to three years later, and that the site of the existing building would then be available for the new building for the National Library of Scotland. It was a great satisfaction to know that they might now regard the plans as definitely settled, and they had the assurance of the Government Department that no time was going to be lost in giving effect to them." It is surely most unfair that under consideration of urgency great works should be pushed through by official pressure. Here is a great Library building not likely to be completed for eight years, and a short delay for the settlement of suitable designs cannot be called unreasonable.

Scale Model, Calton Site Plans.

The *Edinburgh Evening Dispatch* states that when Parliament rose for the Christmas recess Mr. Lansbury promised that the plans for the new buildings on the Calton Jail site would be submitted in about six weeks' time. "I understand," writes the London correspondent of the *Scotsman*, "that the plans are now practically complete, and will be ready by the beginning of February, as Mr. Lansbury stated, but the Scottish Fine Art Commission, to whom they are to go, decided to consider them along with a scale model of the buildings, shown in relation to their surroundings, and this will take two or three weeks longer to prepare. It will, therefore, be about the end of next month before the Fine Art Commission is in a position to consider the plans, and after that they have, of course, to go before the City Corporation for approval, this having been already agreed."

"Students' Night" at the Institute.

"Students' Night" at the R.I.B.A. is always one of the best attended and most stimulating evenings of the season, and Monday's meeting was no exception to the rule. The students were present in large numbers to listen to two addresses that were well up to the high standard which we have come to associate with these occasions. The President's address, excellent in its rapid sketch of architectural evolution and in its reminder of the value of tradition in modern work, was also full of wisdom on matters of practical interest for the student. Mr. Ansell, too, discharged with complete success the difficult task of criticising the designs submitted for the current series of competitions, tempering justice with mercy and seasoning criticism with the salt of Attic wit. The most disconsolate of unsuccessful students must have felt heartened by Mr. Ansell's encouraging words to try his luck again. The presence of Mr. George Lansbury, the genial First Commissioner of Works, added a further distinction to the meeting, and it was interesting to note that while confessing himself as the youngest student there (architecturally) he yet hoped that the Department which he represented would benefit by his presence. In view of certain architectural projects in Edinburgh and London, architects will fervently echo that hope.

Irish Monuments.

There are at present under consideration in the Free State two Bills of major importance to architecture, and for the information of those interested we may add that each has been reprinted as amended in one or other of the two Houses, and can be obtained from the Irish Stationery Office through Messrs. Eason & Son, Ltd., Lower O'Connell Street, Dublin, for threepence. The first is the National Monuments Bill, 1929. Ireland, although singularly rich in ancient monuments has till now been hampered in their preservation by entirely inadequate legis-

Octagonal Crypt below Chapter House, Westminster Abbey: Suggested for Use as Sacristy.

(*See page* 226.)

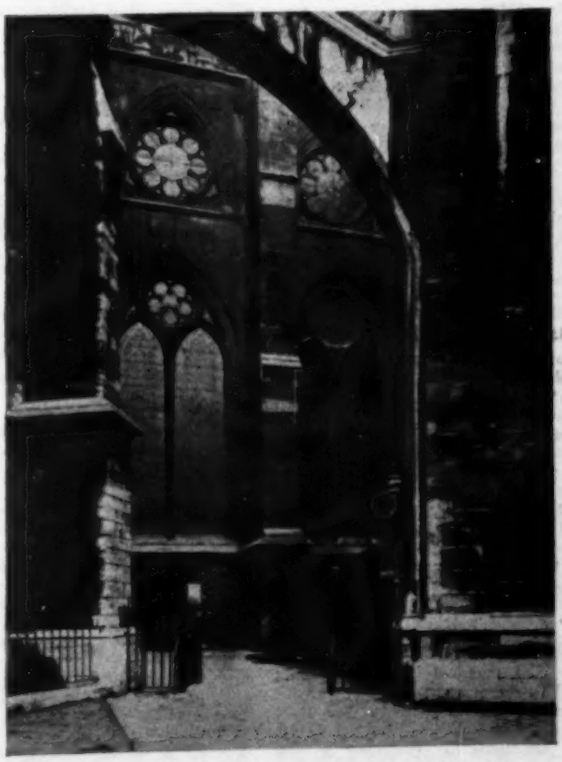
lation. This Bill will bring to bear all the powers of preservation that architects and archæologists generally would like to see. The limit as to age that has so far prevented such a gem of architecture as Sir William Chambers's Casino at Marino from being scheduled has been abolished. The export of objects of archæological interest is only to be permitted under licence. Another important feature of the Bill is that it will for the future be possible to safeguard not only the monument in question but also the amenity of the site with the surroundings and access thereto. An advisory council is to be set up to assist and advise the Commissioners of public works who may acquire, or act as guardians to national monuments, the definition of which is commendably comprehensive.

Irish Town Planning.—The second Bill is the Town Planning and Rural Amenities Bill, 1929. This was introduced into the Senate (the Upper House) by Mr. Thomas Johnson and has been widened and considerably strengthened in Committee. If it passes the Dail without serious change it will give wide and very valuable powers, not only in town and suburb, but to all local authorities towards the preservation of their amenities. It might be optimistic to expect that these powers would at once, and universally be put into operation but their existence would stir local authorities and responsible societies and individuals to an enhanced appreciation of seemliness and would undoubtedly lead to a progressive campaign against ugliness and vulgarity generally. The local authority is the only body that could be called upon to administer a censorship that we more and more are forced to admit is necessary, and the Senate has wisely inserted the safeguard of an appeal to the final decision of the Minister in the event of dispute.

Unemployment & Building Work.—Mr. J. H. Thomas made a cryptic speech some days ago suggesting that the Bank of England was prepared to assist in solving the problem of unemployment. A correspondent writes:—"There have been many guesses made as to his exact meaning, but I have good authority for saying that the new policy is likely to bring substantial contracts to the building industry. The policy lying behind the announcement is that the Bank of England, and probably the other banks, will look with special favour on those firms who are prepared to reorganise their works so as to keep the cost of production as low as possible and to avoid all waste. In such cases credit will be allowed. Undoubtedly this will mean considerable rebuilding in all parts of the country, which will be good news both to the architects and to the builders."

Rubbings of Brasses.—No more interesting and valuable handbook has been issued from the Victoria and Albert Museum than the catalogue of Rubbings of Brasses and incised slabs arranged in chronological order by Muriel Clayton, M.A., assistant in the Department of Engraving, Illustration and Design. Though there are finer brasses abroad, it seems likely that the development and history of this branch of art can be better studied in this country than anywhere. How expressive and beautiful are some of the ancient brasses may be realised from such illustrations as plate 49, that of Alianora de Bohun, Duchess of Gloucester. The rubbings are classified under military costume, civil costume, ecclesiastical costume, etc.

Drawings for the R.A.—Many of our readers have written to enquire whether, in view of the Royal Academy's decision to give preference this year to geometrical drawings for exhibition in the Architectural Room, perspectives are to be altogether excluded. We have made enquiries on this point and are officially informed that "the word 'preference' was carefully chosen to indicate that the usual perspective drawings were still admissible, but that it was intended not to show so many of them."



Westminster Abbey: The Poets' Corner Site.

GENERAL NEWS

Professional Announcement.

The General Purposes Committee of the Metropolitan Water Board recommend that Mr. A. J. Johnson, architectural assistant, be appointed chief architectural assistant as from February 1, 1930.

R.I.B.A. Examination Papers.

The questions set at the Intermediate, Final and Special Examinations, held in November and December, 1929, have been published, and are on sale at the R.I.B.A., price 1s. (exclusive of postage).

Syon Park.

Hampton District Council has decided to oppose the Middlesex County Council scheme for acquiring Syon Park for a sewage depot for South-west Middlesex, and to send a letter of protest to the County Council. Richmond Town Council also has protested against the scheme.

The Bartlett School: Centenary Appeal.

In aid of their centenary appeal, the Architectural Society, University College, are to present "R.U.R.," by Karel Capek, in the College Gymnasium, Gower-street, on Tuesday, Wednesday and Thursday, February 11, 12, and 13, at 8 o'clock. Tickets, 3s. 6d. and 2s. 4d., may be obtained from the Secretary, Bartlett School of Architecture, Gower-street, W.C.1. The proceeds will be devoted to a proposed new atelier.

Sir Robert Lorimer's Estate.

Sir Robert Stodart Lorimer, K.B.E., R.S.A., F.R.I.B.A., of Melville-street, Edinburgh, and of Gibleston, Kilconquhar, Fife, architect, the designer of the Scottish War Memorial Shrine at Edinburgh Castle, and of the Chapel of the Knights of the Thistle in St. Giles' Cathedral, Edinburgh, who was for some years engaged on the design of the War Cemeteries on various fronts, and who died on September 13, aged 65, left, in addition to considerable real estate, personal estate in Great Britain valued for probate at £82,134.

Barnet Grammar School.

Hertfordshire Education Committee has accepted plans submitted by Mr. C. F. Skipper, of Cambridge, for a new boys' grammar school at Barnet to replace the existing Queen Elizabeth Foundation, which has become inadequate. The new school, which is to cost just over £50,000, is to be built on a site bought by the County Council in Queen's-road, Barnet. It will have accommodation for approximately 325 boys. The original Elizabethan hall at the old school has been acquired by Jesus Hospital visitors, by whom it is to be preserved. Mr. Skipper's scheme was submitted in a limited competition.

College of Estate Management.

From the annual report of this College, recently issued, we learn that another very successful year's work was maintained. The work of the provincial centres has been extended to Glasgow, where it is hoped that a Programme of Lectures will be arranged for students taking the professional examinations in March. At September last, we learn that the total number of candidates taking tuition from the College was 1,461. The staff has been strengthened by the addition of Mr. H. A. Mackmin, F.S.I., M.I.C.E. The new president for 1930 is Sir Edgar Josiah Harner, who takes the place of Sir Arthur G. Dilley, M.B.E.

Chester Newgate Scheme.

The Chester Improvement Committee have considered the reference back from the Council of their proposal regarding the Newgate improvement, and have resolved that full and detailed estimates be prepared of the cost of carrying out the scheme submitted by Mr. Walter Tapper, the possibility of grants, whether the scheme is capable of being modified, and whether it is possible to carry it out in sections. The Council employed Mr. Tapper to prepare plans for the erection of a new Newgate in order to meet modern traffic requirements. The plans were turned down by the Improvement Committee, and were afterwards referred back by the Council to the committee for further consideration as to the total cost.

Aerodrome Sites.

As a result of the activities of the civil aviation section of the London Chamber of Commerce, it is understood that the council of the Association of Municipal Corporations at its next meeting will consider the advisability of representing to the Air Ministry the need for compulsory powers to enable local authorities to acquire sites for aerodromes. Progress in the development of municipal aerodromes, and, as a result, of civil aviation, has, it is contended, been held up by the absence of such powers. The civil aviation section would also like to see compulsory powers given to local authorities to prevent buildings being put up in such close proximity to the aerodrome as to render flying dangerous, and so to cause the subsequent withdrawal of the licence.

Gift to Nation of Tretower Court.

Tretower Court, in Breconshire, one of the most interesting relics of mediæval Wales, has been purchased by the Brecknock Society and presented to the nation. The gift has been accepted by the Ancient Monuments Department of the Office of Works, and the work of repair, which is urgently necessary, will begin forthwith. In many respects Tretower Court is a unique example of a fortified mediæval manor-house. Built in the fourteenth century, it was the home of fifteen generations of Vaughans, including the Welsh national poet, Vaughan the Silurist. An appeal is made by Lord Glanusk on behalf of the Brecknock Society for £1,000. This sum, which will meet immediate needs, has been provided on loan in order to avoid delay and to make certain the preservation of this historic possession.

Scottish National Galleries.

The Royal Commission on National Museums and Galleries recommend a scheme for the Scottish National Galleries, in accordance with which a new site and building would be required for the Museum of Antiquities. If this could be provided, space could be found for a Gallery of Modern Art and a Department of Prints and Drawings. In regard to the National Gallery, the Commission incline to the view that it would be well not to pursue the policy of acquiring sculpture. Referring to the National Library, the Commission state that where private individuals have shown themselves so generous, it is at once the duty and the interest of the State to deal in a sympathetic spirit with the reasonable requests of the Trustees. The Commission agree with the view that a National Museum of Casts should be established in London.

Training for Management.

We learn that the Institute of Industrial Administration, whose offices are at 47/51, King William-street, E.C.4, has now completed the working out of a complete system of study for those who seek to fit themselves for leadership in industry. Mr. A. S. Comyns Carr, K.C., whose legal experience has brought him into close touch with the need for such a movement, without attaching him to any particular section or theory, is supported as president by a strong body of vice-presidents. A strong board of examiners is headed by Principal H. Schofield; and Mr. E. T. Elbourne, the honorary director, is not only a practical manager but a consultant of long experience in many industries and a leading writer on industrial administration. The Institute is concerned, not with the technical problems of any one industry, but the problems of management common to them all. It has laid down a definite course of instruction, and is holding examinations in the surprisingly wide range of knowledge which is, or should be, common to management in all industries.

C.P.R.E. Oxford Conference.

Representatives of societies whose object is to preserve the beauties of the countryside and representatives of organisations who are frequently criticised by the societies met in conference at Oxford on Saturday. The object was to evolve some reconciliation between the claims of those who wish to conserve our heritage of beauty and those whose duty it is to advance the development of a modern industrial state—aims which at times appear to be inevitably conflicting. Many protests were expressed at various forms of disfigurement, but in the main the delegates were guided by the advice of the president of the Conference, Mr. H. A. L. Fisher, who declared "it is of no use denouncing Mammon, we must coax, convert, and educate." The practical outcome of the conference was the adoption of a series of resolutions indicating measures for the preservation of beauty and suppression of ugliness. The recommendations advocated, among other things, that: Hoardings should be forbidden except on approved sites; local authorities should suppress untidiness by fines; county councils should be invited to guide the development of housing, communications and industry so as to preserve contours and colours of the landscape.

COMPETITION NEWS

Sunday School, First Church of Christ Scientist, Plymouth.

The following notice has been issued by the R.I.B.A.:—"The Competitions Committee desire to call the attention of members to the fact that the conditions of the above competition are not in accordance with the Regulations of the R.I.B.A. The Competitions Committee are in negotiation with the promoters in the hope of securing an amendment. In the meantime, members should not take part in the competition."

OBITUARY

Sir Thomas Matthews.

We regret to record the death of Sir Thomas Matthews, late engineer-in-chief to Trinity House. Sir Thomas was the son of the late Mr. John Matthews, who was for many years borough surveyor of Penzance, and who carried out many important works in the town, including the building of the Public Buildings and the Alexandra-road. Sir Thomas served an apprenticeship with his father at Penzance, and later proceeded to London, where he became an assistant in the engineering department of Trinity House. In 1881 Sir Thomas was selected by the Honourable Corporation of Trinity House to proceed to the island of Minicoy, in the Indian Ocean, for the purpose of reporting on the proposed lighthouse there. He also designed and erected new lighthouses at Spurn, East Usk, Withernsea, Black Nore, Lundy North, Lundy South, St. Mary, Pendeen (near Penzance), Pendennis, High and Low Beachy Head, Portland Bill, Rumble Head, and Cape Pembroke (in the Falklands). In addition, he carried out several important works. He was adviser to the Crown Agents for the Colonies and the India Office relative to lighthouse matters. Sir Thomas was a member of the Council of the Institution of Civil Engineers. He was knighted in 1909 when engineer-in-chief of Trinity House, and in recognition of his distinguished career he was made a freeman of the borough of Penzance in 1922. He was 80 years of age.

CORRESPONDENCE

The Drawing of Architecture.

SIR,—In my letter of the 17th inst. I challenged Mr. William Davidson to show that camera and eye perspective were similar, and now I should like to "throw in the sponge." Since Mr. Davidson raised this point I have had several photographs made for me by a professional photographer, and on testing them I find that they coincide with my sketches in point of line.

It is an interesting point when one reads what Mr. Hullah Brown has to say on the subject. In "Sketching without a Master," page 22, he says:—"In two important respects photographs are to be mistrusted. First, photographic perspective is not always correct. The relative sizes of near and distant objects as shown in a photo are not always as the eye sees them. Objects in the foreground appear larger and objects in the distance appear smaller in the photograph than in a sketch correctly drawn. Secondly—and this is of more vital importance—the relative tones are rarely true to Nature, partly because colours have unequal actinic power—which is well illustrated when a deep blue appears in the print as lighter in tone than a bright red—and partly because the photo will lose detail, and consequently tone value, either in the high lights on account of over-exposure, or in the deep shadows as the result of under-exposure. . . . Speaking generally, photographs should only be used as an aid to special study, and should never be relied on as the original source of inspiration. The original source of inspiration should come from Nature herself."

With regard to Mr. Davidson's point concerning vertical vanishing points, these are by no means peculiar to the camera, being advocated by leading authorities, such as the late Mr. G. A. Storey, but they must be upwards and downwards *from the eye line*; but since the Greeks used to attempt to counteract curvature by building in curved rather than straight lines, I myself prefer to let the set square settle this question. But apart from these questions of detail, I still hold to my point that the camera is a distortion of Nature, and I go further and say that the encouragement of photography in the Press means death to art, and particularly to democratic art.

O. NEWBOLD.

SIR,—I have to thank Mr. Newbold for his further explanations regarding his views on this subject. If he can make it pay to design individual houses at less than 6 per cent. he might tell us how he does it. Taking surveying, negotiations, Court, eighth-scale, half-inch, and detail drawings and supervising into account, I cannot see how it is to be done. A recent case might interest him. The client got a price direct from a builder for a garage. He thought it high and consulted me. I built his garage for half the builder's price and charged him 10 per cent. So much for the delusion that it is cheaper not to employ an architect.

Mr. Newbold says:—"If architecture does not exist for the people it ought not to exist at all." Mr. Newbold here talks as if architecture was other than mere good building. What does he suggest—that we should return to caves and bearskins?

With reference to his remarks on the R.A. and the R.I.B.A., surely he, as an architect and artist, recognises that an architect is none the worse for being an artist, if, indeed, it is possible to be an architect without being an artist.

If Mr. Newbold will tell me whether it is his own eyes or mine and what they see which are to be compared with what a camera shows I will accept his challenge if he can further tell me how the results could convince a third party. How is it that camera portraits are so often good likenesses if the camera distorts? How is it that black-and-white artists and poster designers use photographs so much if photographs are so unreliable? In fact, as I have already proved, a bird's-eye photograph is more accurate than most bird's-eye perspective drawings. As I know from his drawings, Mr. Newbold's eyes see very well, and so far mine have served me satisfactorily.

WILLIAM DAVIDSON.

Tribute to Architects.

SIR,—Mr. Charles Mattingly's suggestion is a good one—certainly much more to be commended than that of living architects signing their buildings. With all the vagrances of fashion there has been preserved through the ages a certain unanimity as to what is truly fine and great. The R.I.B.A. might formulate a scheme for putting a plate on buildings of recognised merit say fifty years after the designer's death. This would appear to be even more commendable than the presentation of the annual medal for the best building of the year. The best building of the year may or not be great architecture, but in fifty years a building has either sunk into obscurity or, like an old master, is cherished by the connoisseur.

We put plates of recognition on the houses which have been occupied by poets, artists, and great explorers, and we buy masterpieces of paintings for our national collection, and this suggestion of Mr. Charles Mattingly is about the only way in which we can show our appreciation of the architectural masterpieces of our forerunners. The expense would be small and the scheme would make the laymen familiar with the names of the men we desire to honour.

AD VALOREM.

Domestic Building and Quantities.

SIR,—Will you allow me to join issue with Mr. J. R. Taylor upon two statements in his otherwise admirable and informative article, "Domestic Building and Quantities," in your issue of January 10. Mr. Taylor says: "The number of quantity surveyors prepared to guarantee the accuracy of their quantities is increasing." This assertion is somewhat misleading, as all quantity surveyors guarantee the accuracy of their work to the extent of their Common Law liability.

Further on, in the same paragraph, he advocates payment to the quantity surveyor, *pro rata*, to the amount of the certificate. In so doing Mr. Taylor has lost sight of the fact that the surveyor is in a different category from both architect and contractor, inasmuch as the work for which he is employed is completed before the tenders are received. This being the case, it is hardly necessary for me to labour the injustice to him if payments on account only were made during a possibly lengthy period for work completed by him at heavy expenditure.

JOHN M. THEOBALD, Hon. Sec.,
Quantity Surveyors' Committee,
The Surveyors' Institution.

SIR,—Mr. A. J. Willis quite rightly claims that when quantities are prepared by a competent surveyor employing a competent staff the errors are few in number and insignificant in amount. Also, as he points out, gross errors seriously affecting the client's interests carry their own penalty if of such a nature as to induce judge and jury to find a breach of implied warranty of professional care and skill. Does it not follow that in either event the truly competent surveyor would run but slight risk by giving the proposed guarantee? The competent surveyor is not aimed at and would not be hit; but if the practice of issuing quantities prepared on standard method and covered by guarantee became general, a great many incompetents would be driven out of the field.

J. R. TAYLOR.

A Folkestone Housing Scheme.

SIR,—We are naturally very flattered to see in your last issue the excellent sketch, by Mr. Martin S. Briggs, of the North-street portion of the housing scheme which we carried out some few years ago on the difficult site at Durlocks, Folkestone. It should perhaps be explained that the possibility of creating a housing scheme in those difficult times for building, of such a picturesque character that it is deemed worthy of Mr. Briggs's art and of your space, is due to the great generosity of Sir Philip Sassoon, M.P., who desired to make provision for some of his fishermen constituents, who were then housed in very inferior accommodation. Sir Philip's interest in the arts is well known, and in this case his desire was to show that a housing scheme, even in times of financial stringency, could be something worthy of the town, and an example to other builders. That competent judges should think some measure of success has attended this effort is very gratifying.

CULPIN & BOWERS.

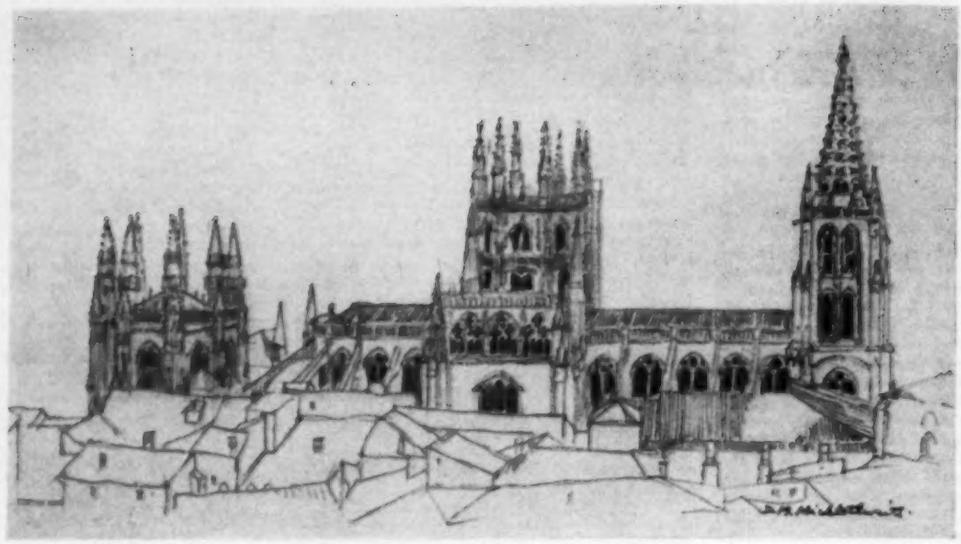
Land Let on Building Lease.

SIR,—As a result chiefly of compulsory State education during the past fifty or sixty years, the poorer classes of the community have become much more enlightened, and, in consequence, many old ideas, habits, and superstitions have been superseded. With them have gone many obsolete laws. There is, however, a law still in force in this country that ought to be abolished without delay. I refer to the old Roman Law giving permission to the owner of the land let on a building lease for 99 years (usually at a rental sufficient to repay its value at the time, with interest, many times over during the term of the lease) to dispossess the owner of the building erected on the site at the expiration of the term. This system is most unfair to the lessee, more especially at the present time, when national and local charges are so heavy. Surely it is most unjust to be dispossessed of one's house, shop or factory by the landowner, who has received the rents throughout the term of lease. The continuance of these old leasehold land laws is the cause of acute poverty, and even ruin, to vast numbers of industrious people, and of excessive wealth to others who have not earned it. And it is the very results of this unfair system which sustain it. The landowners who have thus amassed so much wealth are consequently so much more powerful than their victims, and any attempts by the latter to alter the vicious system are promptly stifled. They do not realise how greatly this unequal distribution of wealth affects the prosperity of the country.

All this could, however, be altered by the passing of a law making it compulsory for the lessor to give the lessee who is in possession of the property an option to purchase the site at a reasonable price during the leasehold term; such price to be fixed by a State arbitrator if necessary. Here is an example of what can occur under the present system. I have an acre of agricultural land worth £20. I could let this on a building lease for 99 years at £4 per annum ground rent. The lessee might build eight houses value £800 to £900 each on the land. At the expiration of the term my heirs or assigns would dispossess the owner of the property, demanding with menaces that he put it into thorough structural and decorative repair down to the smallest detail. Thus, the owner of the land worth £20 receives £4 a year for 99 years and then property worth over £6,000.

It might be argued that the lessee knows what he is contracting for. That, however, does not alter the injustice. Moreover, in many cases he has no alternative but to enter into a lease and submit to the terms of the freeholder who will not part with the land. The practicability of the law above proposed is proved by the fact that there are landowners (unfortunately in the minority) with sufficient sense of fairness to allow the leaseholder to purchase the site at a reasonable price during the term of the lease. If future leases were not permitted for more than 21 years this system above referred to would in due time end itself. As this is a matter vitally affecting the interests of so many, I feel it should be given the utmost publicity.

FREEHOLDER.



Burgos Cathedral, from the North.

From a sketch by Mr. D. M. Micklethwaite.

THE LAND OF THE CID—II

THE CHURCHES OF BURGOS

By D. M. MICKLETHWAITE.

The incredible number of churches in Burgos makes one wonder if there are not too many for the population; but a religious people to whom the care of the soul is all-important can find a use at least for most of them. At one end of a long list are those large churches, with many altars, of which the religious day never seems to be completed; buildings of which an activity in one form or another is betokened by the frequent tolling of the bell. Of such a kindred are the two great churches of San Gil and San Esteban. At the other end of the list are the lesser-known buildings, in some cases classical, sometimes neglected, and occasionally converted into barracks. Such erections are still conspicuous by their lofty bell-cotes, which give them an appearance of prominence that in some instances they no longer possess.

The church of San Gil is full of interest, but it is tucked away in a corner of the city. Like other cities of crooked streets, Burgos displays its buildings to the distant observer, but tends to conceal them at close quarters. Having found San Gil, the traveller approaches it from the west and mounts to the western doorway. The casual character of this church gives to the exterior a great charm: crowning the lofty walls are the low-pitched roofs which are so characteristic of the country. The rugged corrugations of these south-European tiles which, generally of a red colour, assume with age a variety of hues, are in themselves a striking ornament to any building; the clumsy overlaps, the wavy lines, the bright lights and deep shadows produce, indeed, a very fine effect.

San Gil dates principally from the XIVth century; it has a cruciform plan with an aisled nave and several adjacent side chapels, one of which is surmounted by an octagon vault, carried upon pendentives; on the south side of the church rises a low tower. On this side also are the sacristies, against the east wall of one of which is the tomb of a Spanish gentleman and his two wives. This fine old building is rich in tombs, a double tomb occurring in the little chapel to the south of the High Altar. The chief object of interest in the corresponding chapel on the north side is its XVth-century Retablo. These Retablos are always found inside Spanish churches and, frequently, not only behind the High Altar but also in the side chapels; they are generally either classical or of the late mediæval period. Examples of the latter are usually elaborately enriched, and they consist for the most part of tiers of niches, enclosed by a fringe of beautiful carving. In Spanish cathedrals, the Coro frequently interferes with the internal effect, but at San Gil there is not this drawback, and the interior is spacious. Street draws attention to the attractive little pulpit of perforated iron which is still to be seen and admired inside the church of San Gil.*

A little to the north of the Cathedral stands the fine old church of San Esteban. This building has an exceedingly picturesque exterior, establishing itself, as it does, as a central feature in a group in which it is difficult to distinguish the church from the surrounding houses. The latter appear, in some cases, to be attached actually to the church itself, which rises, a weatherbeaten and somewhat haphazard structure, before a background of red roofs. The tower, at the west end, is a good example of sympathetic Gothic, with its low tiled roof and battered walls.

San Esteban, dating principally from the late XIIIth and early XIVth centuries, consists of a nave of five bays with a clerestory and quadripartite vaulting and terminating in a polygonal apse; there are north and south aisles, also terminating in a similar manner, and to the south of the church are the cloisters. The visitor enters the church by the west doorway; on either hand are three carved figures, and overhead is a carved tympanum; above this occur a low balustrade and a beautiful rose window. A Retablo closes the vista in the nave and aisles alike, but it is less pleasing in the case of the nave than in that of the aisles, and, as sometimes occurs inside the smaller churches of Spain, there is for a Coro, a gallery—in this case most imposing, with ambons at either end—which is situated underneath the tower. The church contains many tombs, the majority of which are of the plateresque period. The early XVIth century was most prolific in such work, for the plateresque style belongs to a period when the power and opulence of Spain were at their height. At the Hospital del Rey, the plateresque features are most interesting and beautiful, and, in fact, a vast number of buildings in Spain can show examples of this period.

Close to the west front of the Cathedral is the restored church of San Nicolas, aisled, lofty, and consisting of three bays, the westernmost containing a gallery. Quadripartite vaults occur, with additional ribs in the case of the nave; there is a low tower. Although the date may appear to be late mediæval, it is possible that there is some earlier work in the building. Two imposing features are to be noted—the fine triple tomb under a beautiful crocketed canopy against the north wall and the particularly fine, very large and rather complicated Retablo which occupies the east end of the church. This Retablo has a tomb at either end.

A little farther west is the somewhat insignificant church of Sta. Gadea, small, aisleless, with a tower at the west end. It was here that the Cid was said to have extracted the oath from Alfonso VI before he became king.†

A group of churches, including San Lesmes‡ lies to the east of the city, and many others, including San Pedro, are situated to the south of the river, for Burgos is indeed a museum for the ecclesiologist, and a few in fact of its churches are of classical design.

No visitor leaves Burgos without calling at the Real Monasterio de las Huelgas, which lies about a mile to the west of the city. This Cistercian nunnery was founded by Alfonso VIII. of Castile, whose tomb and those of several other royal personages are situated within the conventual Church; the traveller is shown only a portion of the latter, but this, the great church of the once mighty Las Huelgas, is, however, a most imposing structure, consisting principally of an impressive aisled nave, a crossing with vaulted lantern and bell-cote, two transepts, a Capilla Mayor and cloisters. To the north-east of the north transept rises the lofty tower with its forbidding machicolations; south of this is the porch containing sarcophagi, well and richly carved.

The Church of Las Huelgas is fine in its severity of treatment; it dates principally from the late XIIth and early XIIIth centuries. Simple carving decorates the capitals of the piers, and above them spring the quadripartite vaults. The visitor is allowed only to cross the transepts, and to see the Capilla Mayor and the sacristy; he may regard the nave through a screen merely. Yet

* G. E. Street: "Some Account of Gothic Architecture in Spain." Vol. 1. I am indebted to this book for directing me to the useful authorities of Ponz and Flores.

† Before he would permit Alfonso to ascend the throne, the mighty Cid compelled him to swear that he was not the murderer of his brother Sancho.

‡ Ponz ("Viage de España," Tomo xii. Madrid. 1788), describes San Lesmes and other churches of Burgos.

limited as the tour of the church may be, an idea may be gained of the austere merits of an interesting interior, in which perhaps not the least beautiful objects are the metal pulpit and the sarcophagi within the porch.

Las Huelgas possesses now but a remnant of its former greatness;§ at one time the powers of the abbess were wide indeed, and the convent recruited itself from amongst the nobility of the land.

A most attractive position is occupied by the Cartuja de Miraflores. On a hill about 2½ miles to the south-east of Burgos stands the little monastery, dating from the XVth century and with an establishment of about thirty Carthusians. A monk acts as guide, and the stranger is shown the small aisleless church of five bays vaulted with many ribs, with a polygonal apse at the east end; also the three side chapels which adjoin the building on its north side.

First and foremost in importance are the magnificent tombs,¶ namely, that of King John II. of Castile and of his Queen, Isabella, a most delicately carved sixteen-sided monument of alabaster which stands in front of the High Altar, and that of their son, the Infante, a lofty memorial, perhaps thirty feet in height, which has been built against the north wall of the church. There can be few monuments of the period in Castile, Aragon or Catalonia to equal these examples of exuberant carving, rich, flowing and free. Both the tombs are the work of that famous XVth-century sculptor, Gil de Siloe, to whom also has been attributed the elaborate Retablo, adorned, it is said, with the first gold which Christopher Columbus brought back from America. Two magnificent sets of stalls may also be seen, one classical, the other late Gothic, the latter being a fine example in walnut of the carving of Martin Sanchez.

But if the Cartuja is worth a visit for the sake of what its church contains, it has, on the other hand, its own atmosphere of charm. long avenues of lofty trees guide the wanderer to this desolate yet peaceful spot: within, the white robed community bustles about its duties, conscious ever, perhaps, of those watchful eyes which Pereira has given to their statue of San Bruno, the founder of the Carthusians; without, the tawny landscape rolls away towards that lonely valley where, in the monastery of San Pedro de Cardeña, there lay buried for many a long year the bones of the Cid, the most famous warrior of Spain.

§ See Florez: "España Sagrada," Tomo xxvii, Madrid, 1772.

¶ See J. B. Waring: "Architectural, Sculptural and Picturesque Studies in Burgos and its neighbourhood." London, Fol. 1852.

"THE BUILDER" DEBATE

XXV.—CAN OUR STUDENTS DRAW?

SIR,—"Positive" says that nine-tenths of the visitors to the exhibitions of work by the architectural schools are people who view the proceedings in a thoroughly superficial manner. He is probably right, and writing apparently as a typical visitor, his own impressions seem to bear out the point. From a superficial standpoint, such an exhibition may well appear to show nothing but showy things, but like all exhibitions, the things of real merit and studentship have to be sought. "Positive" appears to have failed to find them, as most superficial visitors will fail; but they are nevertheless there to be found.

He is evidently of an age and generation which remembers a different system of education, when students' drawings were largely composed of portions of plates from the building construction text-books tidily arranged and drawn on a sheet of Whatman, and coloured according to the book of rules. By the side of these would be some measured drawings of any subject on earth so long as it was "old," and a few mild essays in historical repetition which were given the name "design." One does not defend the present system of architectural education as something perfect and therefore not to be improved. One contents oneself with considering whether as a system it is an improvement upon the methods of a past generation, and tempers the content with a determination to improve it still further.

It is probably true that a good deal of the exhibitions which we see and visit include a great deal of "eye-wash," but is it not true that the exhibitions of old also included a great deal of similar balm? Surely those building construction sheets were little more than this, for it can hardly be thought that their execution taught the student much about building construction. "Positive" declaims against certain tricks and fashions of draughtsmanship; but every age has its own affectations, which are dear to the mind of the trivial but of little bearing upon the essentials of the moment. The comfort is that the modern affectations are less laborious than those of the Victorians, and therefore less distracting from the essentials.

The real test is whether the student, when turned out fully trained from his school, is equipped with a broad outlook upon his art. We have plenty of men in practice now who have passed through practically the modern course of school training, and, if we are to judge by the present standard of their work, theirs is a broader outlook than the niggling stylistic outlook which was that of all but the few masters of the Victorian school. We could read a good lesson from the results of modern competitions, a fair proportion of which are won by schoolmen. Some of the Victorians would stand little chance against the skilful planners who abound at the present time; and I have always been given to understand that planning is a first essential of fine architecture. At any rate, there is no branch of design which calls more for the sound, broad view, and there are few architects capable of producing a fine plan who are "stumped" with the rest of their design.

"Positive" complains about young students designing "in the grand manner." Surely it would be better if we did a good many things in "the grand manner," for if knowledge and skill prove equal to the great task, the smaller tasks will find an easy solution. But men who are occupied through their youth in designing gardeners' cottages and village pumps may find it difficult to adjust the focus upon the greater problems which will be theirs if they are capable of meeting them.

"Positive" should spare a day to visit a modern architectural school in working time. He would find that there is a good deal more done than prepare "eyewash" for the next exhibition. The R.I.B.A. has recognised the improved standard of education by permitting the full school course to qualify for their Associateship. Is not this some proof of ruling conditions; or is "Positive" at war with the whole age, and disapproves? No; drawing, as always, is made up of much artistic skill with a certain amount of affectation and fashion. If "Positive" looks deep enough he will find there is still plenty of the former to be found, and that the latter is as little significant as it has always been.

STUDENT.

SIR,—The most excellent article entitled "Can Our Students Draw?" touches upon a subject of such far-reaching importance to all branches of the profession of architecture that one wishes it could have been given position on page 1 rather than on page 26 of your issue. That an architect should be able to draw with facility and truthfulness and that he should understand the exact purpose of drawing in relationship to actual architecture is his foremost need; and of all branches of drawing, that of correctly setting up perspectives and rendering them in various manners suited to the purpose for which they are required, with the shadows of all outstanding features correctly projected, is probably the highest attainment of draughtsmanship.

Having devoted much time for many years to working out all manner of perspectives, from tiny sketch perspectives to normal views of great buildings or large bird's-eye views of vast lay-outs rendered in almost any medium other than oil-colour, I can vouch for the fact that the need for such drawings is found to be widespread and essential. The results of making such drawings are invaluable, and surpassed only by the profound interest and deep joy of preparing them.

It is along the royal road of cultivating a true understanding of perspective and commencing at a young age to attain facility in sketching existing buildings and in ultimately mastering the process of setting up perspectives from scale plans and elevations of projected schemes that the secrets of true architecture are to be discovered and that buildings worthy of this great definition are conceived.

That the authorities at the R.A. (who are surely not about to disregard architecture as the mother of all the Arts) should, without any stated reason, as far as I am aware, suddenly make it known that perspectives are to take second place to mere geometrical elevations is surely to disregard the more than excellent purpose that such drawings perform within the sphere of the architectural profession, and more particularly to ignore the fact that, from the point of view of the R.A. exhibition, such drawings properly justify their inclusion, entering the sphere of pictorial art by virtue of expressing not merely facility in T-square and drawing-board draughtsmanship but pictorial expression, which is found only in those who may claim to be artists as well as draughtsmen.

Furthermore, those who visit the R.A., as being representative of contemporary art, need to discern not merely coloured diagrams of the means by which the architect achieves his aim, but the nearest possible approach to the aim itself. If not models, one must at least have perspectives, which at once convey to the lay-mind a comprehensible idea of the buildings as they will appear when erected. Correctly-worked-out and well-rendered perspectives form a vital link between the architect and the public.

At a time when, indeed, there seems some evil genius at work to thwart any true understanding on the part of the public, as a whole, of the great mission which the architect should perform, that one of the clearest means of approach to the general intelligence should be discouraged from inclusion in that one particular room in Burlington House where the public have been accustomed to discover it is only to draw another curtain across the art of architecture, the one particular art which, one would have thought, should be given not a small room at the Royal Academy but rather the greater exhibition space as standing foremost among the arts of an intensive civilisation.

To favour geometrical drawings rather than perspectives is both to discourage that particular form of draughtsmanship which is the only form which calls for the combination of high technical knowledge with pictorial expression and to deprive the public of that one factor which makes the exhibits in the architecture gallery attractive and understandable to all those who are ready to be interested in architecture, though having little or no idea of the wide knowledge and technical skill which are involved in its achievement.

JASPER SALWEY, A.R.I.B.A.

[Further correspondence on this subject is held over.]

ADDRESS TO STUDENTS.

On Monday last, at a meeting of the R.I.B.A. at 9, Conduit-street, the President, Sir Banister Fletcher, F.S.A., gave an address to students. Such an address, he said, had for many years been one of the duties of the President, and it might appear strange to them that he should say that it did not seem long since he was himself a student listening to the President of that time. He did not know that he could add much that was new to the valuable addresses of his predecessors. They must, however, remember that, though the matter might not be new, it was presented from a new angle by a new mentality, and, moreover, the presence of new students justified the annual repetition of an address as a stimulus to renewed effort in their work.

He would feel inclined, if he had his way, to deal with the study of architecture from his own experience of the difficulties which had to be surmounted, and the setbacks and disappointments which every architect must encounter both in his preparatory stage and in his after career, and it would perhaps be of more interest to talk to them in less formal surroundings than that occasion required. However, he hoped to put before them some thoughts, ideas and suggestions which he believed might be of use to them in preparing to start on the great adventure of life. He would remind them of the noble profession they had selected, and of the great architects whom they followed who had enriched the world with creations of surpassing beauty so that it was difficult to imagine what the conditions of life would be without them. If we thought of architecture in this aspect it must arouse a spirit of enthusiasm and create a determination to make a constant effort to design buildings which might go down to posterity as worthy examples of creative work of the age in which we lived.

It was well from time to time to review the history of our art in the different countries of the world in order that we might realise the importance and diversity of an architect's work. Egypt stood for all time marked out by her pyramids, those stupendous mounds of masonry, by her mysterious and awe-inspiring temples and tombs which, with their wall sculptures, formed a lithic history of the race, and were of unending attraction and interest. Greece, that wild and mountainous country, might be considered the fountain head of purity in architecture; and the Parthenon, created by Ictinus and Callicrates, with the co-operation of the sculptor Pheidias, excelled all other temples, combining as it did in the most successful manner, architecture, painting and sculpture; and Greek architecture, both on the mainland and in the islands and colonies, had exercised incalculable influence on succeeding art.

Rome, spreading her Empire over the whole of the then known world, and influenced by Greek art, practically laid the foundation of subsequent development in architecture, for wherever the Roman standards were planted there sprang up the peculiarly Roman type of building. The Pantheon at Rome was a notable achievement in what was then a new form of building, as it owed the possibility of its construction to the invention of concrete, while the thermæ, basilicas, forums, and amphitheatres throughout the Empire were all instances of Roman enterprise in architecture, and of the novel designs they were able to produce owing to the free use of concrete, which was employed universally much as to-day we were at liberty to resort to reinforced concrete and steel framing.

In order to realise the progressive adaptability of their great art, they must note that the mediæval period was productive of other new types of structure—churches, castles, houses, monasteries—which, although they differed from the Roman manner of building, yet derived many of their features, both constructive and decorative, from Roman precedent. The Renaissance period itself, with new palaces, mansions, guild-halls, and town halls, while assimilating the features of old Roman art, also owed much to the mediæval period both in planning and detail. There were giants in those days, men of vision and of practice, men of versatility who were masters in their art, such as the inventive Brunelleschi, the correct Vignola, the playful Sansovino, the mighty Michelangelo, and the scholarly Palladio. In England, Inigo Jones and Sir Christopher Wren, while their designs were based upon Italian masters, still stood out as great Englishmen who had exercised enormous influence on later English architecture. Modern architecture, however, in its accumulated knowledge of all previous phases of architectural development—Egyptian, Greek, Roman, Mediæval, and Renaissance—had naturally been influenced by such knowledge, but must be controlled by the necessity of planning buildings suitable for the diverse requirements of our peculiarly complex civilisation. England had had her own distinguished line of architects, of whom we might well be proud, and whose work the students might confidently follow, while also keeping in mind the necessity of developing their own ideas and of realising the new needs, great and small, of our ever-changing conditions, both in the Mother Country and in the Dominions overseas.

They would, he trusted, remember the conditions which in all countries and ages of the world exercised their determining influence upon architectural style—those we might regard as permanent officials in control of architecture. But in these later days there were special aspects of great material importance which called upon us to exercise ingenuity in plan, elevation and general detail. There was the serious increase in the cost of labour, and this would appear to be a new condition which had come to stay, if not to grow. Therefore they must decide what was the best use to which they could assign the funds at their disposal. They could allow this limitation to hamper their style, or they could turn it into an aid to inventiveness. Now here again they were not left without a signpost from the past, for the great Sir Christopher Wren was faced with this same difficulty in an aggravated form when with very restricted outlay he had to rebuild the city churches after the Great Fire. They could study each church and notice how he apportioned the money at his disposal to that part of the design which would be most effective—one of the great lessons they could learn from this past master in their art. Triumph over new difficulties was the test of power to turn untoward conditions to inventiveness in design. The higher cost of labour was a factor that controlled, not only the actual work on the building, but also the prices of all materials, whether stone, bricks, reinforced concrete, wood, lead, tiles, steel, and all this had to be estimated for in a new way, and so there must be a marked change in architectural treatment to meet this economic necessity. We might, indeed, even be thankful that superfluous ornament and meaningless features and dust-collecting mouldings were being largely eliminated in the search for reduction of cost. Here he would sound a warning note that they should study the wishes of their client as to expenditure. They must not allow their own ideas of design to outrun his ideas of outlay. They must learn to cut his coat according to his cloth, just as Wren did in his churches. Moreover, now that public buildings, business premises, and private dwellings had to be increasingly huddled together, especially in towns, it became imperative to seek repose in design, besides providing a structural surface that did not lend itself to the collection of smoke and dirt. Reinforced concrete as a modern material was likely to produce novel features when it was used as the carcase of a building, for it demanded great judgment in its external treatment. These and many more problems must not be forgotten when preparing their designs.

The training for students was now carefully laid down by the Board of Architectural Education, and there was little that could be added to the actual syllabus. The knowledge of what had already been accomplished seemed a necessary part of a student's education in architecture, because, if studied aright, it meant that they had realised how the problems had been solved by the architects of successive periods. Nowadays everyone who claimed to be educated knew something about the architecture of the past, and an architect should at least know as much about the history of his art as his client. It was indeed encouraging to realise the increasing public interest in architecture, and in some of the great public schools it was being taught as a necessary and stimulating aid to the understanding of history; and the R.I.B.A. had even recently instituted, as they knew, a series of lectures to children on the subject.

A comprehensive knowledge of the most up-to-date methods of construction was of the greatest importance, and too much stress could not be laid on this aspect of their work, for design and construction could never be divorced, and, indeed, could not be too intimately connected, so that steel construction, graphic statics and calculations in regard to structures were properly included in the necessary professional education of an architect.

He regarded it as of supreme importance in a student's training that he should study and measure old buildings. Sketching facilitated their powers of drawing in perspective and of making studies of their own proposed buildings as they would actually appear, while measuring existing buildings puts them in touch with actual construction and brought them into communion with the craftsmen of the past by showing them how they attacked their difficulties and carried out their work to a successful completion. They should have a sketch-book always with them to jot down any detail of construction which would be of use in their own designs. The R.I.B.A. medal for measured drawings was, in this respect, one of the most useful competitions for which a student could enter, as he thus gained much practical knowledge. He had many pleasant recollections of the twenty successive years that he went on the A.A. excursion to different parts of England, when they sketched and learnt to love the architecture of the homeland, besides making many lasting friendships.

It was impossible to lay too much stress on the importance of design in an architect's training, since designing for practical requirements was the architect's *raison d'être*, and he was most successful when he arranged plan and elevation to produce a harmonious result in mass and proportion. He (the speaker) also regarded as of great value the

competitions held annually under the ægis of the R.I.B.A., because they impelled the student to exercise his imagination in a definite and decisive way in solving a given problem, such as in the Soane, Tite, Victory, and Rome Scholarships in Architecture. He therefore advised them to enter as many of these competitions as possible, because they would not only realise their want of knowledge by comparison with other competitors, but would also obtain much satisfaction and experience in working on designs which involved many aspects of an architect's practice.

He looked back with the greatest pleasure on the time spent as a student in the Royal Academy and in the classes of the Architectural Association, and on the competitions for which he entered. Although success was a secondary consideration, he still remembered the satisfaction he experienced in gaining the Architectural Association Medal for Design, the Tite Medal of Merit, and the Essay Prize. In his student days the Royal Academy school was regarded as an institution which every young architect should try to enter, and he would never forget the instructive time spent on preparing designs with R. Phené Spiers, then master of the school, and with Royal Academicians, including Norman Shaw, Sir Arthur Blomfield, Sir Ernest George, Alfred Waterhouse, J. L. Pearson, and John Belcher, for it was indeed a great privilege to have the helpful and instructive criticisms of men of such experience.

In working through courses in design and construction, and in acquiring a knowledge of the nature of materials, of modern sanitary science and other subjects, it must always be remembered that the knowledge thus obtained was only a means to an end, which was the erection of the building itself. That must be the object in view in laying down any scheme of architectural education, and it therefore followed that the student must get practical experience apart from what he could learn at the drawing board and from books.

The various schools of architecture arranged periodical visits to buildings in process of construction, but he would advise any student to act as a clerk or assistant clerk of works, so as to see the building grow from day to day, to learn about the behaviour of different materials, and thus to gain a practical insight in overcoming the difficulties in the erection of buildings. The knowledge which they could obtain from a clerk of works or competent foreman would be of the greatest assistance to them in the carrying out of their own designs.

An architect had to know all about building methods which he had to superintend, and in order to supply this knowledge his late brother, Major H. Phillips Fletcher, arranged that the instructors in the various building crafts at the Trades Training School of the Carpenters' Company should give practical demonstrations in craftsmanship to London University students, and he was frequently hearing of the appreciation of this method of obtaining practical knowledge.

All training should have as its object the turning out of an "all-round man," for no one knew what class of work he would have to carry out in after life, and it might be totally different from his expectations. He thought it was the late Alfred Waterhouse, R.A., who told him that he had always hoped to have a church practice, for he was interested in ecclesiastical art, but that, by force of circumstances, his practice principally consisted in designing office buildings, town halls and assize courts.

Architects were students always, but when the so-called studentship days were concluding, and before starting in practice, it was well to enter other architects' offices in order to get additional experience and a wider outlook. He himself entered three offices of very different character after his pupilage days were over, and had never regretted the time so spent.

In regard to design in modern buildings, they must not be led astray into thinking that they were better able to produce something original without a study of the best examples of what had gone before. There was real value in tradition, and the architect who was thoroughly conversant with it was more likely to exercise originality in his designs than one who had not been trained in the tradition of the past. Architecture, which was lithic history, much resembled language which had come down the centuries with changes in each age. Just as no lasting benefit could come from a newly invented language, such as Volapuk or Esperanto, for we still spoke the language of Shakespeare, though with alterations of phrase, so it was inconceivable that modern design justified originality involving the invention of new forms divorced from tradition. Forced originality was not to be encouraged, for natural originality should result from new conditions and new materials. As Pope had put it:

"In Arts, as Fashions, the same rule will hold
Alike fantastic if too new or old."

It would be admitted that nowhere, perhaps, was there more originality than in American architecture, and yet many of the most prominent American architects had been trained at the Ecole des Beaux-Arts in Paris, where tradition was most rigidly adhered to in the curriculum.

Our first concern after the choice of site was for right planning and effective elevation with correct proportions, but we must not regard detail as of little consequence, for it was essential to success. In domestic work they must consider with an æsthetic appreciation of appropriateness door furniture, window fastenings, mantelpieces, electric fittings, cornices and mouldings; if there was to be harmony in the interior all these must be controlled by the scale and style of the house, simple in type for a cottage, and on a grander scale for a mansion. The brothers Adam owed the success of their delightful houses to the happy combination of general design and decoration, which included fitments, and even furniture. He would remind them that it had been said that genius was the capacity for taking infinite pains, and it was only by hard work that they could hope to succeed.

They must not forget that the competitive system now in general vogue in this country opened up avenues of opportunity, while the good work being carried out in the British Dominions beyond the seas gave further scope for the young architect, which, he believed, did not exist in any other profession. The future lay before them and beckoned them on to fresh effort and ultimate success. Presidents came and went, students came and went, but the art of architecture went on from generation to generation, with firm roots in the past, a living growth in the present, and ready to put forth fresh young leaves in the future, ever growing, ever changing, and yet ever the same. In conclusion, in wishing them all every possible success in their careers, he would exhort them to give free rein to enthusiasm, cultivate imagination, and practise industry, all three of which were essential to a successful career in architecture.

DISCUSSION.

Lord Burnham, proposing a vote of thanks to Sir Banister Fletcher, said his address had been a deft and ingenious combination of the practical and the ideal. Referring to the New Delhi, which he had seen recently, the speaker said Sir Edwin Lutyens and Sir Herbert Baker had had the greatest experience given to architects in the modern age. At one time as many as 30,000 workmen had been at their command. At no time since the Pharaohs had architects been in that position.

Sir William Llewellyn, P.R.A., seconding the motion, said a quaint writer of the seventeenth century had said that the end of architecture was to build well, and he set forth the three essential conditions of architecture as "Commodity, Firmness and Delight." Architecture was not only a science but an art, and the architect should be not only a good builder but a good artist. Knowledge on the scientific side could perhaps be acquired by any person of intelligence, but its artistic side required special aptitude. He hoped that with all the changes that were taking place, beauty would not be lost sight of, although it seemed to be difficult to obtain it in some types of building. He advised students to take advantage of the knowledge and experience of older men and so save themselves much time. Self-sufficiency led to disaster.

Mr. George Lansbury (First Commissioner Works), called on by the President to speak, described himself as the youngest student there, architecturally, and hoped his presence would be to the benefit of the Department he represented. He was a lover of old buildings and could claim to have assisted in the preservation of the old almshouses in the Mile End-road as well as the Bow Church. He was not proud of a good deal of the architecture built for people to live in and he hoped that young architects would give them something better in future.

The vote was then put to the meeting and carried with acclamation.

Mr. W. H. Ansell then read his review of the works submitted for the Prizes and Studentships, 1930, in the course of which he said:—

The essential equipment of the "Compleat Critic" was an unassailable sense of superiority to the rest of mankind. That, he feared, he had outgrown. He stood, therefore, merely as one of the elder brethren, still, he trusted, a student himself, and as such entitled to the freedom of comment which all students claimed. Commenting on the Tite prize (for the delightful and inspiring subject of a small monastery set on the hills above a little Italian town), the speaker said this went to "Corio," Mr. A. Collins, of Australia, who pulled off the prize with a scheme that, on the whole, resolved its elements into well-defined groups. More than all, he had understood and had expressed the simple character and unity of the monastery in both plan and elevation. Speaking generally, the chief faults in the Tite designs arose from three main causes:—(1) The failure to visualise clearly the scheme before beginning the preliminary *esquisse*. (2) The attempt to bludgeon a pre-conceived and unsuitable plan onto a project which it did not fit. (3) Inadequate knowledge of Italian detail.

The subject for the final competition of the Soane Medallion was a Sports Club. "Noah," the winner, plumped for a central social building with double wings projecting to the south. His lay-out was well organised and the scheme had the suggestion of the inevitable which a good plan on paper so often conveyed. The elevation—brick walls with a horizontal stone capping and flat roofs—was all very good and sound, but rather too sedate. One would have welcomed a little more adventure.

In conclusion, said the speaker, it was clear that we must revise our former opinions of the relative characteristics of age and youth. On the one hand, we found grave and reverend youth; on the other, those elders, who, with the natural exuberance of age, clung to their swags like the good acrobats they were. We were obviously safe in leaving the dignity, the austerity and the quiet serenity of English architecture in the hands of the young, but we should have to keep a watchful eye on them when they grew old.

[Before the reading of the papers, on the motion of the Hon. Secretary, a vote of condolence was passed to the relatives of the late Sir Lawrence Weaver.]

ILLUSTRATIONS

PLATES

No. 16, Essex-street, Strand, W.C.

An effort has been made to introduce colour on the exterior by the application of faience work to the publishing house built for the proprietors of the "Illustrated London News and Sketch," the "Illustrated Sporting and Dramatic News," and "Eve." The ground floor of the building is faced with Portland stone, the walls of the upper floors are faced with 2 in. hand-made bricks, and the coloured faience is blue and grey-green in tones with gold reliefs. The outer panel "cable" moulding is of a deep blue colour with gold "fillets." The roofs are covered with asphalt.

Messrs. William and Edward Hunt, FF.R.I.B.A., are the architects.

Theological Hostel, King's College, London.

This hostel, in Vincent-square, begun just before the war and now completed, is one of the principal residential buildings for King's College students. It accommodates 70 students, each having a bed-sitting room with a folding bed, radiator and fireplace. Each tutor has a bedroom and sitting-room, and the block on the right of the illustration is the warden's house. There is a large dining-hall, two floors in height, placed across the corner of the site, so that the bay window makes an attractive feature when the building first comes into view along Rochester-row. There are common rooms, a long, comfortably furnished lounge, a library and a chapel. The chapel is an interesting feature, having a total height of only 15 ft., with groined vaulting in concrete springing from green marble columns with well-carved caps. The plain Byzantine interior is relieved by iron-work balustrades to two small galleries in blue and gold, deep red enamelled electric light fittings and a richly pierced and veneered balustrade at the west end. The chapel was dedicated last June by the Archbishop of Canterbury.

The general contractors for the last portion were Messrs. Geo. Walker and Slater, and the following were sub-contractors:—Anselm Odling and Co., marble work; R. E. Pearse and Co., casements and glass; Laurence Turner, carving; Mowbray and Co., altar hangings and ornaments; C. Hall, ironwork; Osler and Faraday, electric light fittings; Trussed Concrete and Steel Co., reinforced concrete.

Mr. Arthur C. Martin, F.R.I.B.A., is the architect.

"Larkfield," Bromley, Kent.

This house is designed in brick and half-timber, with tiled roofs, the architect being Mr. F. Harrild, F.R.I.B.A.

The Metropole Cinema.

The entrance to this new cinema is in Victoria-street, opposite the Underground Station, the auditorium having its longer axis parallel with Brewer-street. The building is of steel framework construction, with brickwork panels for the main walls, the entrance front being entirely faced with marble—red African onyx, with dressings of white Piastra and yellow Sienna. The interior, in design and decoration, is in the manner of the Spanish Renaissance. Marbles, coloured Spanish tiles, and wrought ironwork of characteristic type are also effectively employed in the interior to heighten the Spanish effect, the decorative treatment generally being in fibrous plaster, with a colour scheme consisting mainly of rich browns, orange, rose, gold, and bronze-green. The organ chamber is in the roof, the console being arranged on a lift in the orchestra. Roofing is in patent concrete tiles, asphalted. Accommodation is provided for about 2,000 persons, of whom 830 are seated in the balcony, and there is a capacious tea-room. The plasterwork constitutes a feature of the building, and the whole of this, including the painting and gilding, was executed by Messrs. Samuel Wright & Co., Ltd., of Hackney Downs.

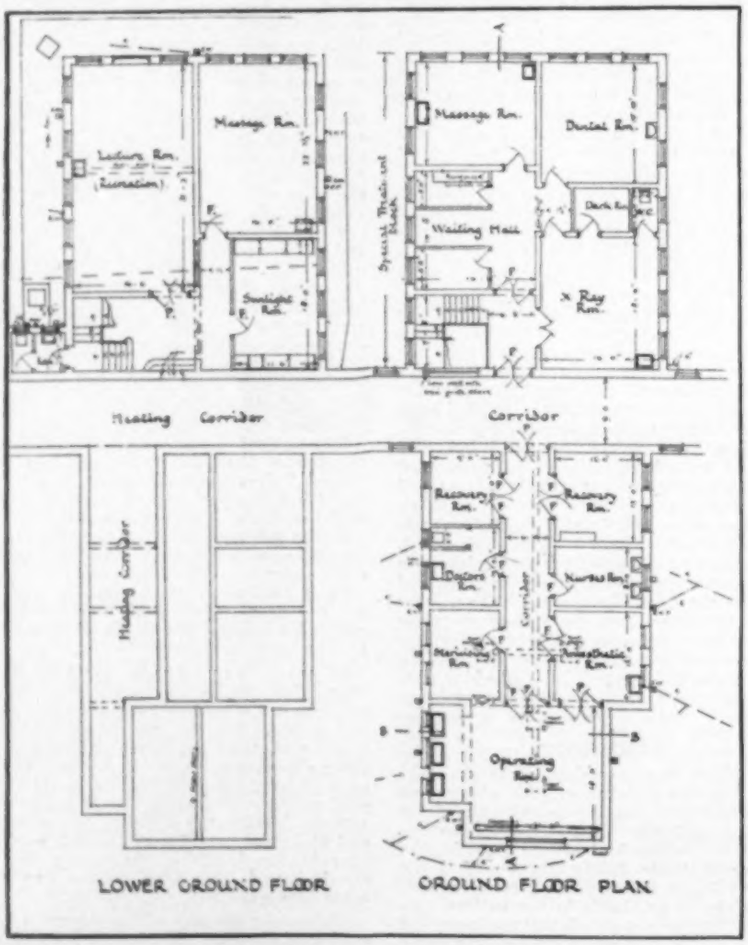
The general contractors were Messrs. Holliday and Greenwood, Ltd., and the sub-contractors were as follows:—London Brick Co. and Forders, Ltd., Phorpres Fletton bricks; Anselm Odling and Sons, Ltd., marble work; British Vacuum Cleaner and Engineering Co., Ltd., vacuum cleaner plant; Frank Burkitt, fire curtain and hydrants; Burn Bros., Ltd., sewage pumping plant; Carter and Co., London, Ltd., tiling; J. Starkie Gardner, Ltd., decorative metalwork and balustrading; Haywards, Ltd., pavement lights; Siegwart Fireproof Floor Co., Ltd., pre-cast concrete roof; W. James and Co., Ltd., metal sashes and lantern light; Braby and Co., Ltd., metal ducts; Leyland and Birmingham Rubber Co., Ltd., rubber flooring; E. Pollard and Co., Ltd., steel shutters; Rubery, Owen and Co., Ltd., steelwork; the Berkeley Electrical Engineering Co., Ltd., electrical work; J. W. Gray and Son, lightning conductors; Western Electric Co., Ltd., talking apparatus; B. Finch & Co., Ltd., sanitary goods.

Mr. George Coles, F.R.I.B.A., is the architect, and Mr. E. W. Cook, A.M.Inst.C.E., the consulting engineer.

Derby City Hospital.

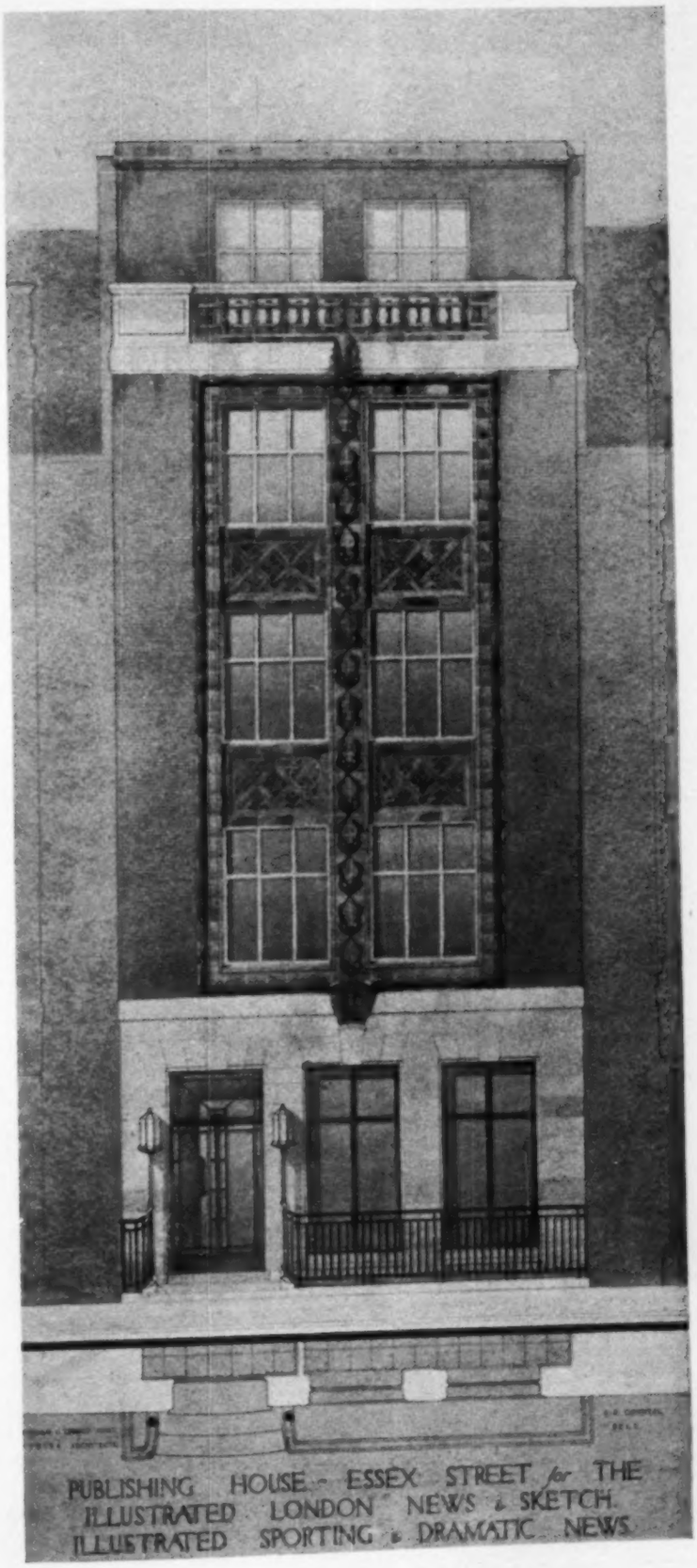
This hospital occupies a site of 28 acres on Uttoxeter-road, Derby, and consists of the central administrative building, with a main corridor connecting ward blocks on either side, east and west. The operating theatre, maternity block, and special treatment blocks are separate units entered from this corridor. The elevations are in multi-coloured brick with stone dressings, and the ward roofs are flat, finished in asphalt, and available for convalescent patients to walk or rest in the open air. The main drive is entered at the east end where the inquiry shelter and porter's lodge are situated. To the south-east is the boiler house, and incinerator, with site for proposed laundry, and near by is the disinfector house. On the south side of the main drive is a sunk garden, and the fields further south provide sites for children's ward and nurses' home. At the west end of the grounds provision has been made for further ward extensions and a site for the medical officer's residence. The main entrance is in the centre of the administration block. Access to steward's office, committee room and resident officer's quarters is from this hall. The nurses' sleeping accommodation is on the first and second floors of this block. Separate entrances for receiving male and female patients are provided on either side of the administration block, and adjoining these are the medical officer's surgery and office, dispensary, and nurses' dining rooms. The kitchen is provided with gas and steam ovens and complete modern equipment, with separate pantry, dairy, and grocery store adjoining. The main store rooms are in the basement, with electric lifts to serve to the kitchen. A cold store is provided for the storage of perishable food. In the east ward there are four thirty-bed wards, each with day room, duty room, bath and sink rooms, linen and store rooms, also one-bed and two-bed wards. Each floor has a covered verandah on the south-west side, approached through double doors. The top floor has two large covered shelters and several small wards with duty and bathrooms. Electric passenger lifts connect all floors. The west ward block is larger, and provides similar accommodation in rather smaller wards, with the addition of clinical room, pathological laboratory and gynæcological room, and also wards for skin diseases and septic cases. The top floor is

(*Continued on p.* 225.)

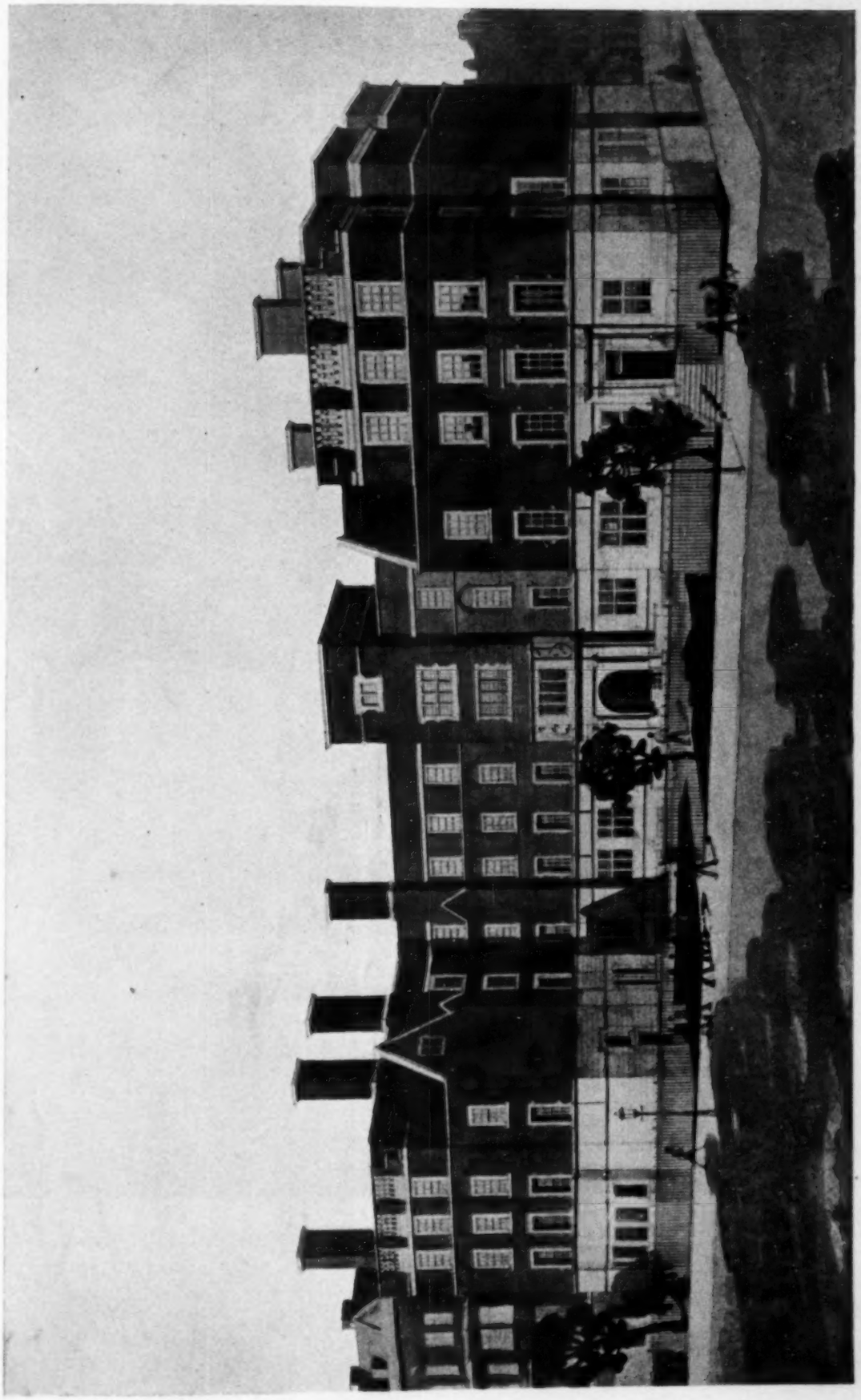


Derby City Hospital: Operating Block.

Mr. T. H. Thorpe, F.R.I.B.A., Architect.

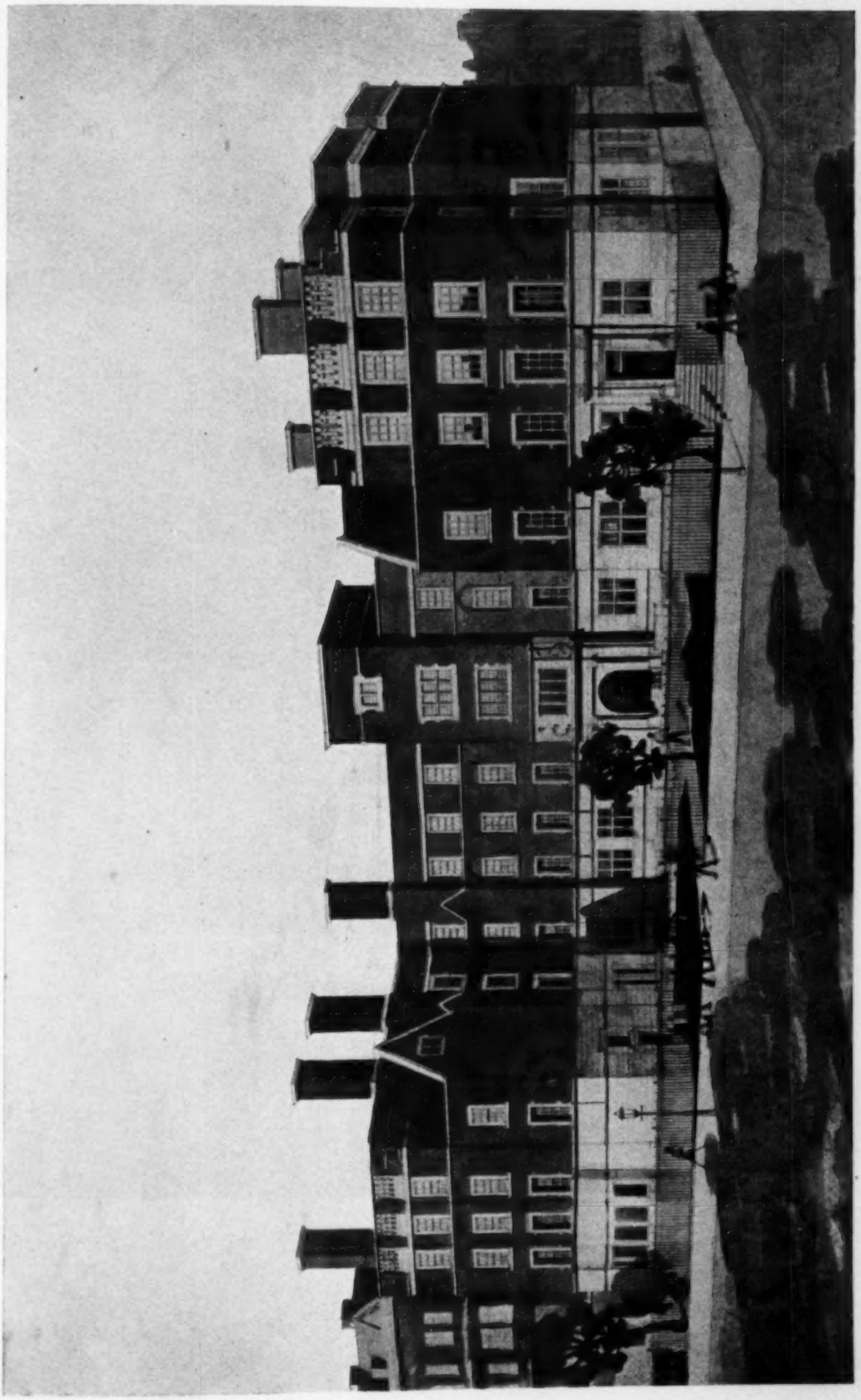


Messrs. William and Edward Hunt, FF.R.I.B.A., Architects.



Theological Hostel, King's College, London.

Mr. Arthur C. Martin, F.R.I.B.A., Architect.



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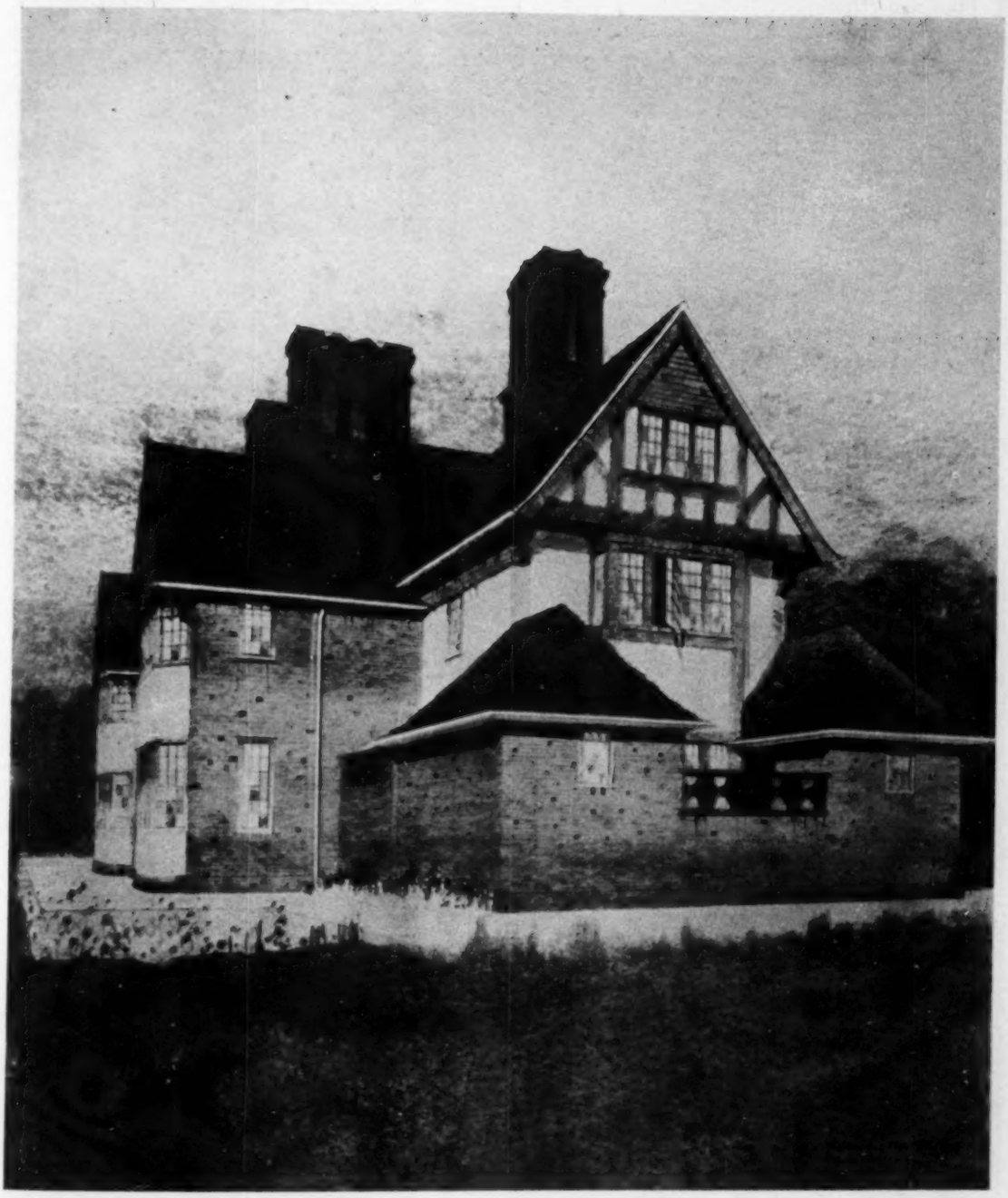
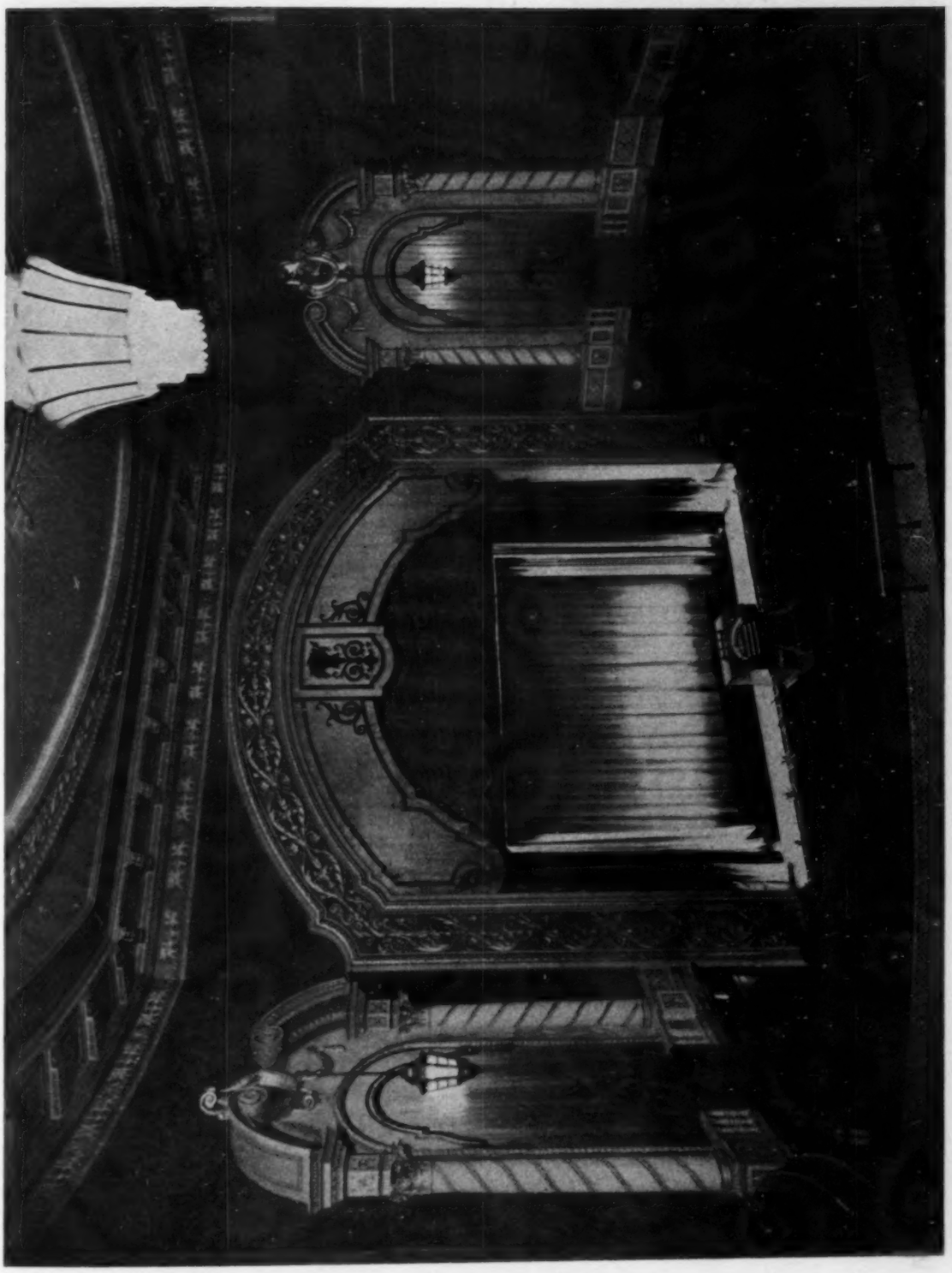


"Larkfield," Bromley, Kent.

Mr. F. Harrild, F.R.I.B.A., Architect.

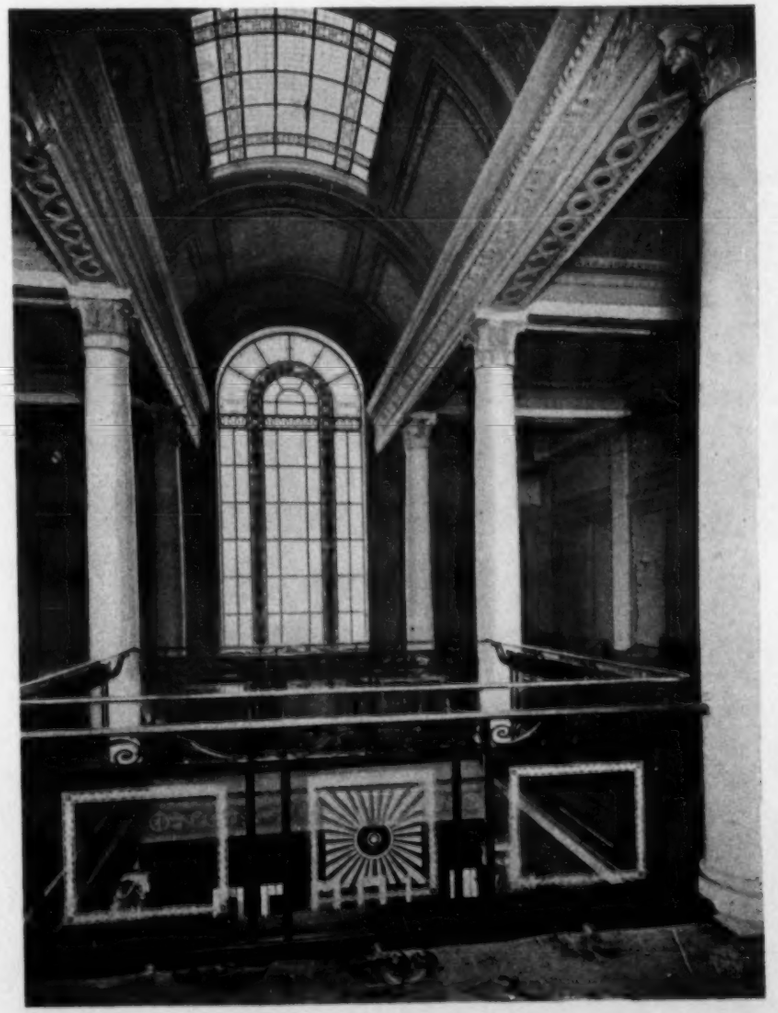


The Metropole Cinema, Victoria, S.W.: Auditorium.
Mr. George Coles, F.R.I.B.A., Architect.

The Metropole Cinema, Victoria, S.W.: Entrance Hall.

Mr. George Coles, F.R.I.B.A., Architect.

EXTERIOR.

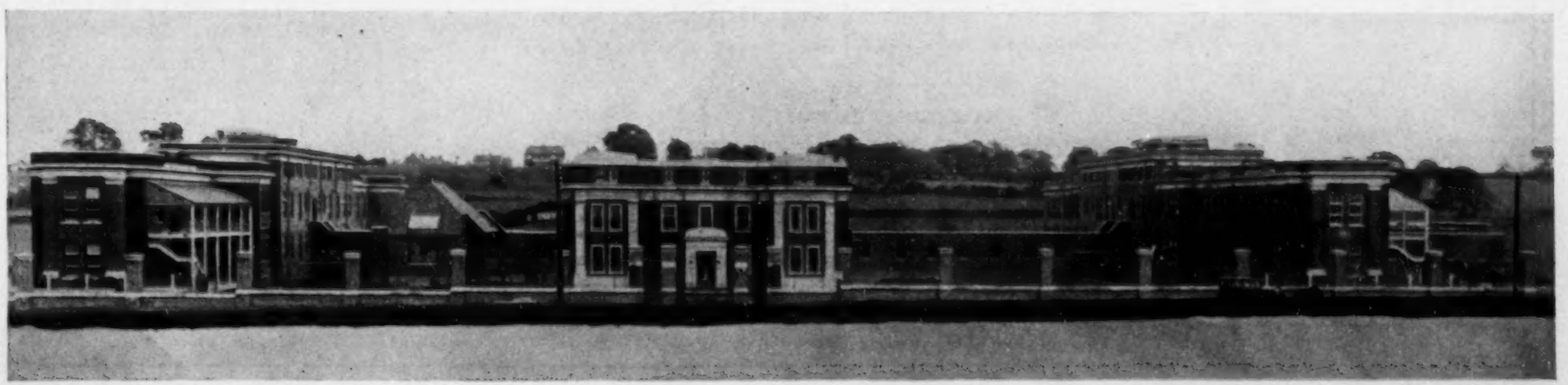


TEA ROOM.

The Metropole Cinema, Victoria, S.W.

MR. GEORGE COLES, F.R.I.B.A., Architect.

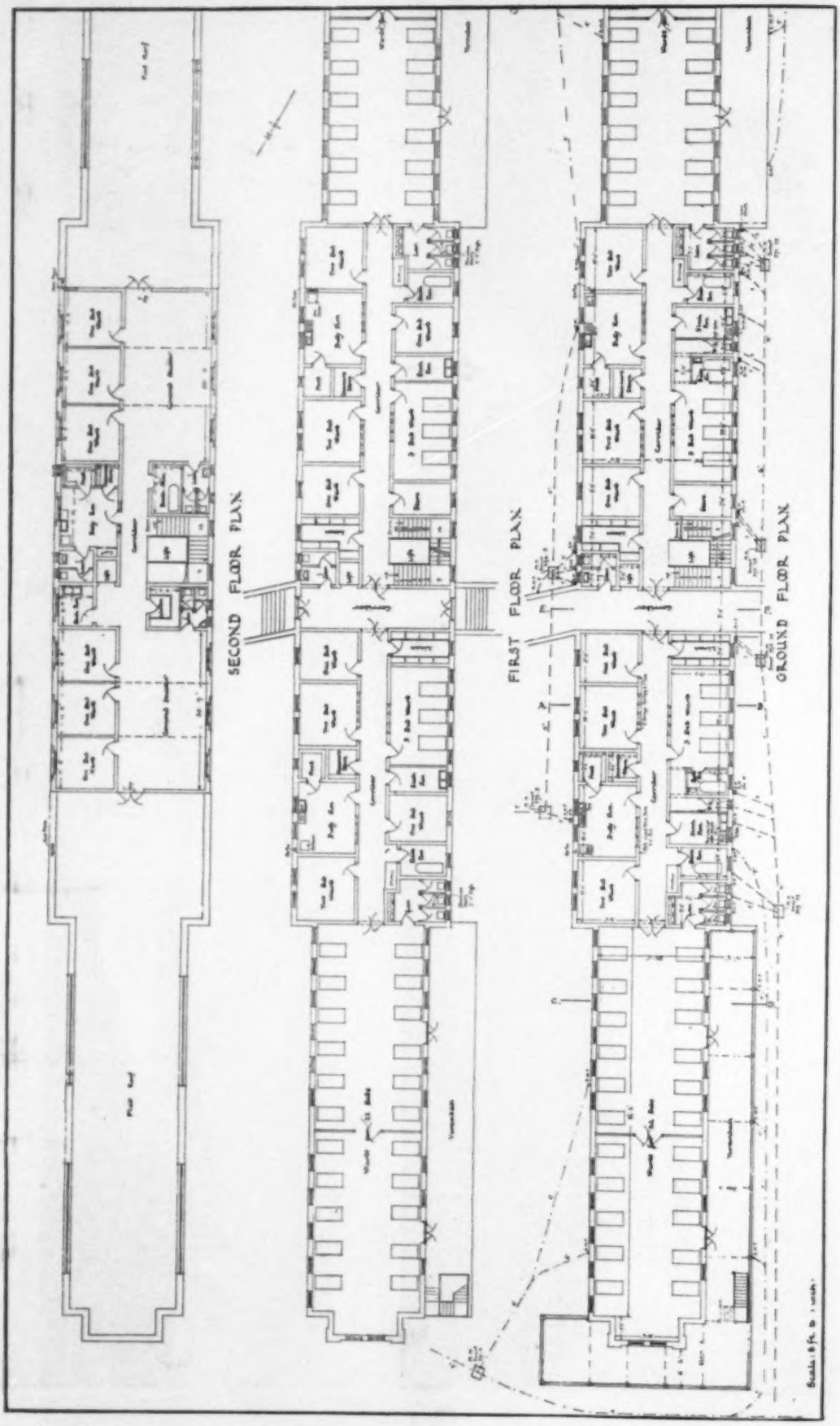
Administration Block and (on left) part of Ward Block.



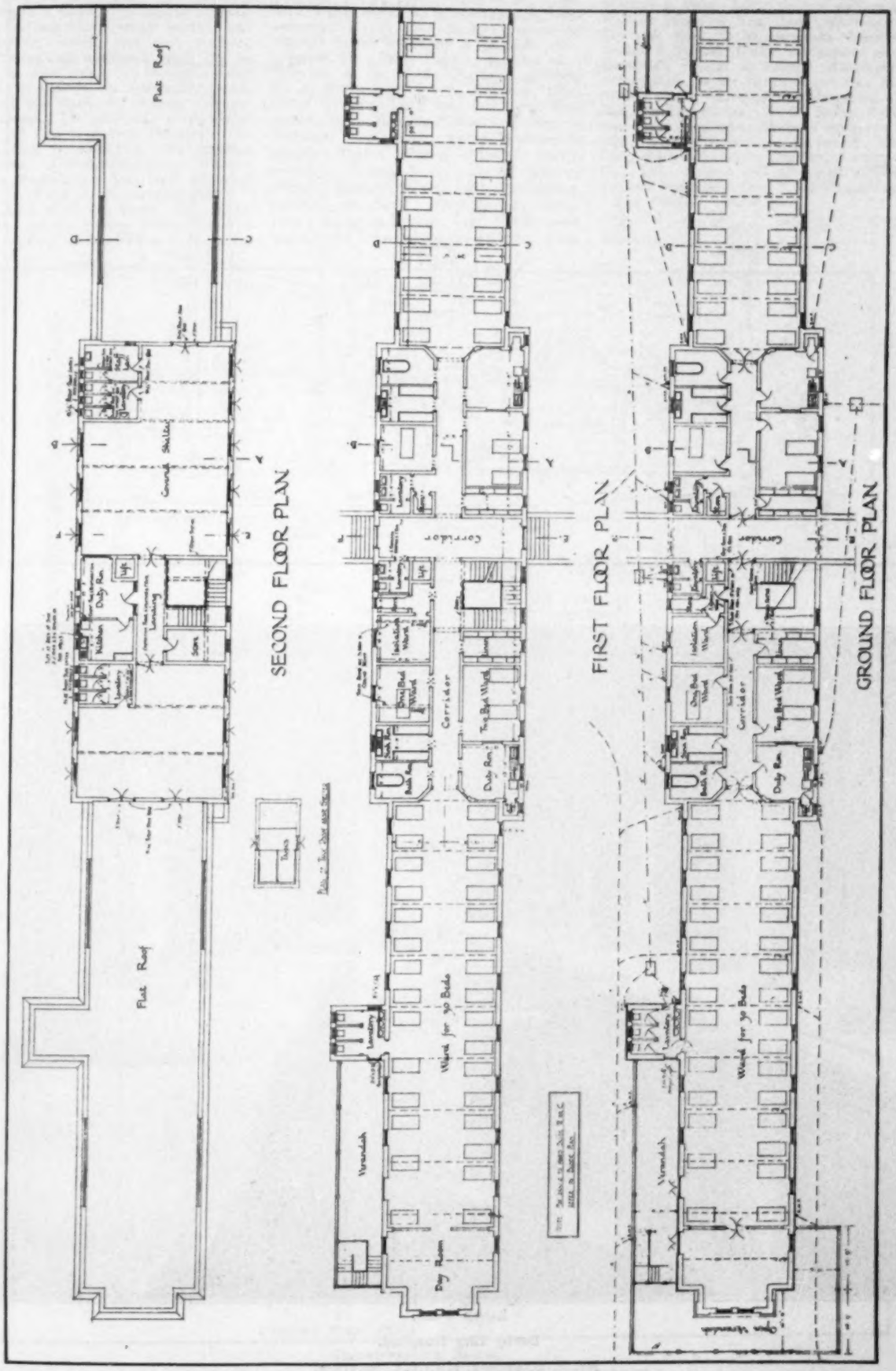
General View.

Derby City Hospital.

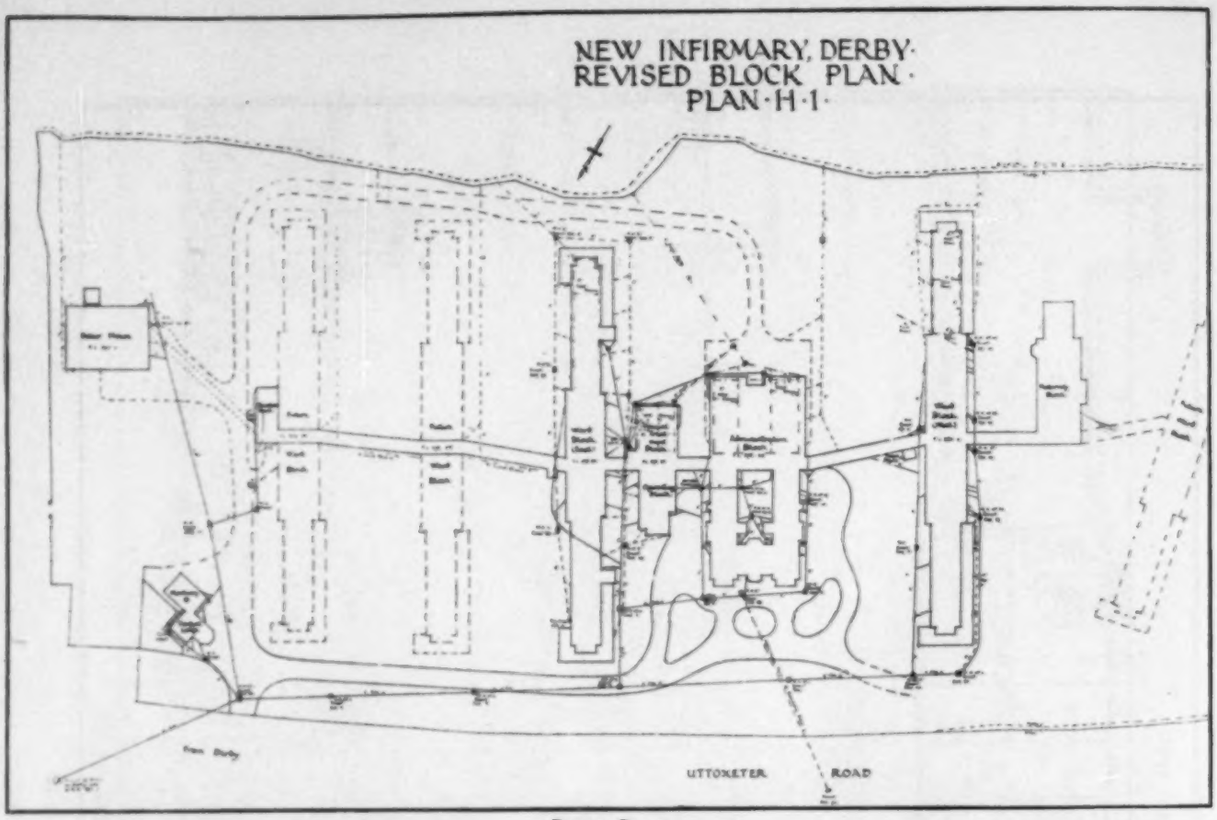
Mr. T. H. Thorpe, F.R.I.B.A., Architect.



Derby City Hospital: Ward Block, West Side.
Mr. T. H. Thorpe, F.R.I.B.A., Architect.



Derby City Hospital: Plans of Wards.
Mr. T. H. Thorpe, F.R.I.B.A., Architect.



BLOCK PLAN.

LABOR WARD,

Derby City Hospital.

MR. T. H. THORPE, F.R.I.B.A., Architect.

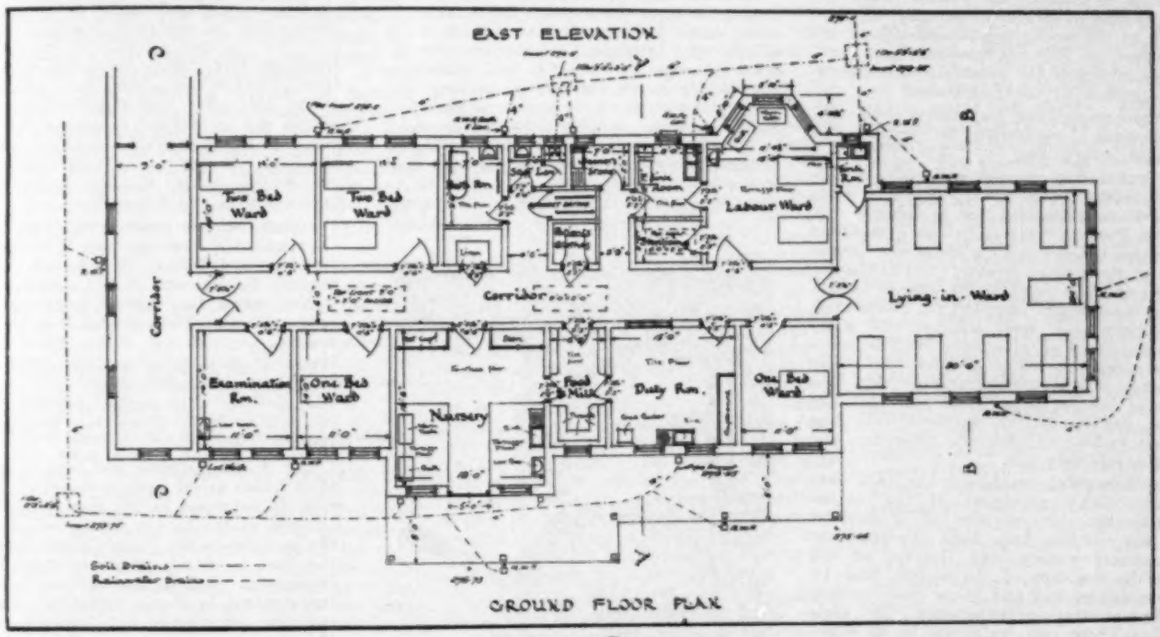
ILLUSTRATIONS

(*Continued from page* 214.)

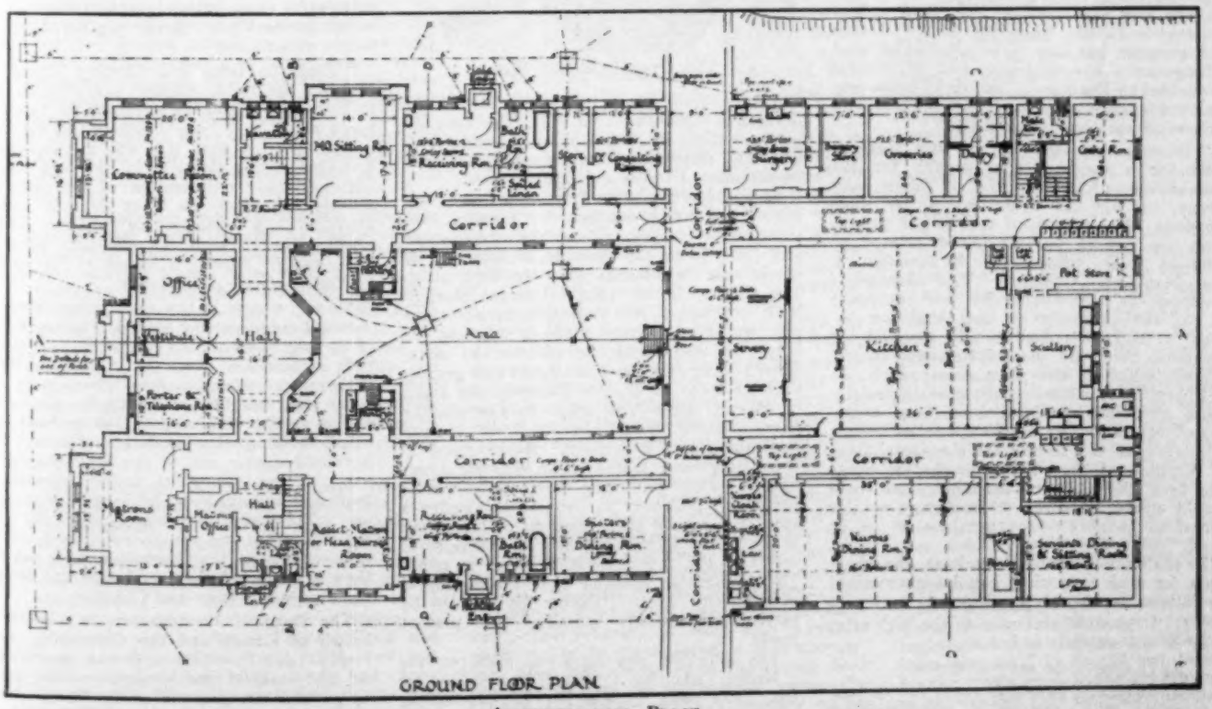
identical with the east block. The operating block contains a large, well-lighted theatre, sterilising and anæsthetic rooms, doctors' and nurses' robing rooms, and two recovery rooms. The special treatment block has an X-ray room with rooms for developing and storing X-ray records, an ophthalmic ward, dental room, and wards for massage and sunlight treatment. The maternity wards are at the west and with a separate entrance. The whole building is heated by the invisible panel system. A complete wireless installation with headphones has been provided through the efforts of the nursing staff.

Messrs. Gee, Walker & Slater, Ltd., Derby and London, are the general contractors, who have also carried out the whole of the reinforced concrete construction. Following is a list of the sub-contractors :—C. A. Newton & Co., Derby, electric lighting and power; Redpath, Brown, Ltd., Manchester, steelwork; Wing & Webb, Wolverhampton, ironmongery; B.R.C. Co., Stafford, reinforced concrete floors; Reddaway & Co., Ltd., fire-hydrants, etc.; Derby Gas Co., gas-fires, etc.; Mellowes & Co., Ltd., Sheffield, glazing; R. A. Evans & Co., Ltd., Leicester, lifts; James Gibbons, Ltd., steel furniture; Haywards, Ltd., fire-escape staircase; Stevens Brothers, Nottingham, roller shutters to garages; Taylor, Whiting & Taylor, Derby, ironwork; Crump & Co., Derby, sanitary fittings; Manlove, Aliott, Ltd., Nottingham, steriliser, disinfector, and incinerator equipment; Rosser & Russell, Ltd., Leeds, panel heating and hot-water supply; Bayliss, Jones & Bayliss, Wolverhampton, iron railings, etc.; E. G. Walters & Co., Ltd., composition flooring; A. E. Dean & Co., X-ray apparatus; Benham & Sons, Ltd., kitchen equipment; William Wood & Son, Ltd., fountain; J. Thorp & Son, Derby, wrought ironwork; Haslam & Newton, Derby, refrigerator plant; Hinchcliff, Hincks & Burnell, Nottingham, stained-glass panel; Synchronome Co., Ltd., electric clocks; Surgical Manufacturing Co., Ltd., bowl sterilisers; W. H. Bailey & Son, instrument sterilisers; Midland Drapery Co., Ltd., blinds; Etchells, Congdon & Muir, Ltd., electric bed lift; Pinchin, Johnson & Co., Ltd., Hygeia and all paint supplies; Cement Marketing Co., "Ferrocrete" and "Blue Circle" cement.

Mr. T. H. Thorpe, F.R.I.B.A., is the architect.



MATERNITY BLOCK.



ADMINISTRATIVE BLOCK.

Derby City Hospital. MR. T. H. THORPE, F.R.I.B.A., Architect.

THE SACRISTY: COMMITTEE'S REPORT

THE report of the Committee appointed last October by the Dean (Dr. Foxley Norris) and the Chapter of Westminster Abbey to reconsider the various schemes put forward for the provision of a sacristy for the Abbey has now been made public. The Committee, while rejecting the "Model" site, which had been selected by the Dean and Chapter, recommend the reconsideration of the Poets' Corner site, and, if this should prove inadequate, that consideration be given to a scheme involving a combination of the Poets' Corner site with the octagonal crypt of the chapter house by means of an underground passage and stairway. Dr. Norris, in a letter to Archbishop Lord Davidson, the chairman of the Committee, states that although the Dean and Chapter were compelled with great reluctance to abandon the Poets' Corner site on the ground of lack of room, they will now, in view of the strong recommendation of the Committee, go into the question again with the new proposals for additional accommodation suggested by the Committee.

In their report the Committee state that the following 14 suggestions for possible sites were laid before them :—

(1) A building on the east side of the north transept or the "Model" site; (2) Several suggestions for a sacristy outside the Poets' Corner; (3) The gymnasium site, which incorporates St. Dunstan's Chapel (south of the chapter house); (4) The chapter library; (5) The crypt of the chapter house; (6) An underground sacristy; (7) The mediæval sacristy site (west side of the north transept); (8) The triforium; (9) The north cloister itself, in whole or part; (10) The west aisle of the north transept; (11) The cellars of the Jerusalem Chamber; (12) The present garden of the deanery; (13) The Norman undercroft (now the museum); and (14) The refectory site.

The Committee emphasise the fact that they are fully convinced of the urgent necessity for the provision of a sacristy. They say :—"We have been impressed by the number, variety and interest of the objects in the care of the sacrist, and by the total inadequacy and grave inconvenience of the existing arrangements for their custody. There can, we think, be no doubt that the lack of a sacristy at Westminster is most serious; it is essential for the proper custody and care both of the plate and of the textile fabrics belonging to the Abbey. The question has also to be considered what arrangements are desirable and practicable to enable the Dean and Chapter to make provision for such exhibition of the Abbey's possessions as they deem fitting.

"It does not seem to us that there is need for a sacristy large enough for the marshalling of processions of choir and clergy, or for the actual robing of their members. We understand that it has always been the custom for the Abbey clergy to robe in their houses and to assemble in the Jerusalem Chamber. The Jerusalem Chamber is convenient for the purpose; it has the authority of long tradition behind it, and it is conveniently situated for access to the west end of the nave of the Abbey, which is the place from which the ordinary processions, and more especially those at great functions, have been accustomed to start. On certain special occasions —notably at the service for the installation of Knights of the Bath—the chapter house has been the place of assembly, and there would appear to be no reason why on similar occasions it should not continue so to be used."

In the opinion of the Committee, the essentials for such a sacristy can be summarised as follows :—

(1) It should be as near to the high altar as is conveniently possible.

(2) It should be easy of access.

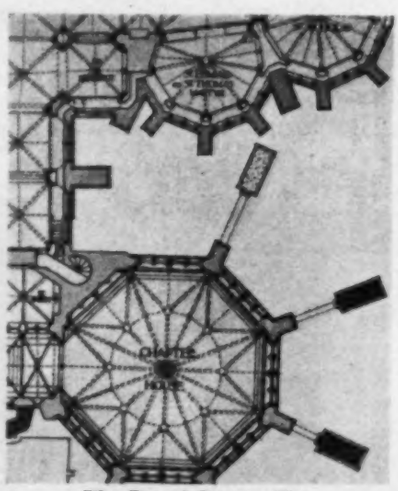
(3) It should have full space for storage, together with reasonable accommodation for possible future additions.

(4) It should have adequate arrangements for cleansing vessels and proper lavatory accommodation.

(5) It should not be necessary to have to pass through the open air in going from the sacristy into the Abbey; to have to pass through the open cloister, for instance—especially in wet weather—would be a serious disadvantage.

(6) The passage-way to the sacristy should not be such as to interfere with the public use of the Abbey. There must inevitably be a certain amount of coming and going from the sacristy to the high altar at times when the Abbey is crowded. Again, nothing should be done to diminish the available seating accommodation of the Abbey.

Certain of the suggested sites the Committee dismiss as "so inappropriate as to make it unnecessary to recount the difficulties in detail." For instance, the triforium (No. 8), however ample in space, is not reasonably accessible, even if a lift were constructed; the north cloister (No 9), apart from historical and architectural considerations, is frequented by so many visitors that it would be highly undesirable to close it; to use the west aisle of the north transept (No. 10) would be to diminish seriously the available floor space and potential seating space of the Abbey;



The Poets' Corner Site.

and some of the other sites—the cellars of the Jerusalem Chamber (No. 11), the deanery garden (No. 12), the Norman undercroft (No. 13), and the refectory site (No. 14)—are unsuitable.

Suggestions Nos. 1 to 7, however, the Committee felt to be worthy of "friendly consideration." They reject the gymnasium site (No. 3) on the grounds of difficulty of access and its distance from the high altar. The chapter library (No. 4) would interfere with untouched seventeenth-century fittings and would necessitate a spiral staircase for access to the church, in addition to interference with existing monuments and graves, such as those of Charles Dickens, the Duke of Argyll, etc. The crypt to the chapter house (No. 5) would, by itself, be "quite inadequate" as a sacristy. With regard to an underground sacristy (No. 6), the Committee, while admitting that it would be perfectly possible to construct such a sacristy, consider that questions of the safety of the Abbey foundations and the difficulty of access to the church must be borne in mind. The Committee consider that the mediæval sacristy site (No. 7) cannot be held to be serviceable towards meeting the present needs.

The following comments are made on the "Model" site (No. 1), which was selected by the Dean and Chapter :—"It has strong points in its favour. It is accessible from the church by an existing doorway, and it is at a reasonable distance from the high altar. It offers, in the opinion of the surveyor, adequate accommodation for present needs. Against this, apart from possible legal difficulties as to the site, must be urged the real and widespread reluctance to see any modern building, however excellent, set against any part of the north side of the Abbey Church. This side, whatever may have been the case in former days, can now be seen in a way which makes it one of the most impressive witnesses to the antiquity of London and to the long story of the Abbey of Westminster."

With regard to the Poets' Corner sites (No. 2), the Committee report that three suggestions have been made for a sacristy in this region, and they comment on them as follows :—

(i) On the south side by Poets' Corner door.—There is a considerable space between the buttresses of the outside walls of the side chapels. It is at present screened by an unsightly hoarding, and is used for various purposes by the Abbey buildings staff. This space could be enclosed. It has the advantage of being near to the high altar, and direct access to the church can be obtained by means of a doorway into St. Benedict's Chapel (at present blocked). Owing to a flying buttress of the chapter house, this site is practically invisible from Old Palace Yard.

(ii) A scheme embodying the Poets' Corner site (i), but enlarging it by extending the south wall of the proposed sacristy beyond the buttress of the church. This would result in unduly narrowing the existing thoroughfare to the Poets' Corner door.

Both these schemes, we understand, were most carefully considered by the Dean and Chapter, but were finally abandoned with reluctance, owing to the lack of adequate space.

(iii) A third scheme has been suggested to us which would combine either (i) or (ii) with an extension to the east of the flying buttress of the chapter house which spans the pathway to the Poets' Corner door. In this way, no doubt, additional space would be secured. But such a building would be inconvenient in shape, and would also, in our view, be open to some, at least, of the objections raised to one on the north side.

After stating their belief that the best solution of this difficult problem may yet be found in the Poets' Corner region, the Committee recommend :—

"That the Dean and Chapter should reconsider the Poets' Corner site with a view to providing a sacristy adequate for the purposes which have been indicated. It has been urged upon us that this site is inadequate, and should this prove to be the case we recommend the consideration of the following scheme, to which we have devoted careful attention :—A combination of the Poets' Corner site (i) with the octagonal crypt of the chapter house by means of an underground passage and stairway."

"This scheme," the Committee continue, "would entail cutting through the north wall of the crypt, which is 17 ft. thick, and we are fully conscious of the objection to interfering with ancient masonry, even when, as in this case, such interference would be practically out of sight. But we feel that perhaps such interference can be justified by the fact that it would enable one of the most interesting parts of the Abbey—at present almost unknown and unused—to be brought into daily use. This crypt has six windows lit from external areas and can be well ventilated."

In conclusion, the Committee point out that they are only advisers, and that the decision rests with the Dean and Chapter.

The Dean of Westminster, in a letter on behalf of himself and the Chapter to Archbishop Lord Davidson, expresses appreciation of the work of the Committee, and agrees to go into the question of the Poets' Corner site again, with the proposals for additional accommodation suggested by Lord Davidson.

THE ARCHITECTURE CLUB

DEBATE ON CHARING CROSS BRIDGE.

THE Official Scheme for Charing Cross Bridge was the subject of a discussion, following a supper of the Architecture Club, held on Friday last at the Architectural Association, Bedford-square, W.C. Owing to the death of Sir Lawrence Weaver, K.B.E., who had been announced to preside, the chair was occupied during the earlier part of the proceedings by Mr. J. C. Squire and later by Mr. Oswald P. Milne. Before the discussion began, Mr. Squire made a few remarks on their late President's many useful activities. Sir Lawrence Weaver, he said, had united in a remarkable way the highest talents of the practical man with those of the man of vision and imagination. Mr. O. P. Milne also paid his tribute of affection and respect, and a vote of condolence and regret was passed, all standing.

The discussion on the Official Scheme for Charing Cross Bridge was then opened by Mr. J. H. Elder-Duncan (secretary of the Club), who showed a number of lantern slides. These were chiefly plans illustrating the scheme as given in the Bill, with the alternative schemes of Mr. E. T. Hall, Mr. John Morris and Sir Reginald Blomfield. Architects, said the speaker, had not been asleep; during the last thirty years they had been turning out schemes. Those he showed were three of the latest.

Mr. W. R. Davidge followed also with lantern slides. The first of these illustrated a project for the uniting of all the railways of London, and having a great central station where the Thames Embankment is now. This project, said the speaker, was of the date of 1850. We had escaped it, and perhaps might improve the scheme now proposed. Other slides showed one or two other schemes for dealing with the problem, and what would be the effect on certain streets if the scheme now proposed was carried through. The thing that struck one most, said the speaker, was the fact that since the scheme had first been introduced the estimates had been increased by very nearly two million pounds. From the point of view of the outsider, it looked as if the Southern Railway had got this in one form or another. Before the railway viaducts were swept out of existence it ought to be considered whether or not it was necessary to have a high-speed road. Any project for replanning the south side must envisage the Temple Bridge, which would undoubtedly come, perhaps twenty or thirty years hence, between Waterloo and Blackfriars. It was important, before tackling the biggest problem London had ever had, that we should think of what we were fundamentally aiming at. We must have a plan of some sort for the definite development of South London.

The Chairman said that the last time this subject had been discussed by the Architecture Club some of its members had thought that at last things were settled, that the Southern Railway was placated, and that something would be done. It might come to the point where a compromise would have to be effected, and in that case it would be something to move the station across the river. The ideal solution was one that had been suggested by Mr. Davidge, the electrification of all the railways when they came within the area, and putting them underground.

Mr. Arthur Keen (Chairman of the Thames Bridges Conference) described how the proposal to build a road bridge at Charing Cross had resulted from the abandonment of the proposal to build a large new Waterloo Bridge. At that time it had been pointed out that Charing Cross would be a much better site for such a bridge. A plan for a road bridge at Charing Cross had been put forward in April, 1928, had met with much disapproval, and had been abandoned. The plan embodied in the Bill now before Parliament was unduly costly, bad from the traffic point of view, failed from the architectural side, and was almost incredibly injurious to the town planning possibilities of South London. The bridge should be treated as an incident in a huge town-planning problem involving roads, traffic and railway accommodation. The problem embraced a very fine river frontage, and, further, a vast improvement in relation to what was now an out-of-date district, and yet was as much part of Central London as the Strand. For more than a generation we had been developing a strong body of town-planning men, thoroughly well-equipped, understanding their subject, he supposed, better than town-planners did in any other part of the world; and it was an extraordinary thing that when this, one of the most important schemes relating to London in a whole century came along, these town-planners were completely ignored. Describing the projected bridge in detail, the speaker said that where it began on the north side a large open space was to be cleared to facilitate traffic. This was on the side of Coutts's Bank and Gatti's Restaurant, and his audience would judge what that would mean in the matter of pounds, shillings and pence—and especially pounds. Moreover, this part of the plan gave no facilities at all for local movement. The Adelphi was cut off, and there was no connection with the Embankment. Anyone on the Embankment wishing to get up on the bridge had to go up Northumberland-avenue and round the merry-go-round. Architecturally, he did not think the project was worthy of a district where were so many of our most important buildings, such as the National Gallery and the official buildings down Whitehall. The view from the bridge at Charing Cross was the finest we had in London. At present that view was degraded by the bridge, and whatever was done, there should be in the forefront of the mind of the designer the desire not to impair that beautiful view in any way, but to add to it by giving the new bridge a beautiful form.

Referring to the south side, the speaker described how for a long distance the road would have on one side the flank wall of the railway. This need not be the case. In the case of Farringdon-road, for instance, railway and road ran parallel, but between them was a line of shops. Another defect of the scheme was the fact that a number of important streets were converted into tunnels. In the case of York Road the tunnel was 360 ft. long.

Alderman Ewart G. Culpin said that to explain where the London County Council stood would be a difficult task, because if the members were asked individually as to where they stood they would say they did not know. It was true the scheme had been passed without opposition, except that he and one other member had protested, but whenever he asked other members about it most of them expressed very grave doubts. He believed the scheme had been carried in the way it had been because of panic; everybody was afraid of putting obstacles in the way of something being done. But practically the whole of the correspondence that had appeared in the Press on the subject since had been against the present proposal; the whole body of expert opinion, so far as it had been advanced in the columns of *The Times* particularly, had been showing up the scheme. One thing had become plain from the last discussion in the County Hall, and from what had appeared in the Press; it was that this was not the scheme of either the London County Council or the Government, but something dictated by the Southern Railway. The interests of rate- and taxpayers ought not to be surrendered in this manner. Mr. Keen had shown upon the screen that the scheme gave no recoupment value; the land had been cut up in a manner which did not allow any noble buildings to be built; but there were odd-shaped pieces of land here, there and everywhere. He had heard rumours that if the opposition to the present scheme continued, Waterloo Bridge would be pulled down and rebuilt. If there was anything in these rumours it was a cowardly threat.

Capt. Swinton said he had gone on the London County Council in 1901, and almost immediately had been a member of a deputation that waited on Mr. (as he then was) Cosmo Bonsor, to consider the possibility of removing Charing Cross railway station to the other side of the river. The reply then given to the deputation was that people had built houses along the South-Eastern Railway in the expectation of being able to come to Charing Cross Station, and that the railway company must keep faith with those people. Referring to the present project, the speaker said that a really fine railway station was the proper gateway for a great city, but we had not one in London worth looking at. With regard to the blank wall between the railway and the road, he did not see why this wall should be blank. Surely there might be shops. Suggestions for putting all the railways for South London underground only delayed the present movement. The question was not one of "daily-breaders" coming to London, but of the traffic of all the South of England. Tubes could not carry heavy goods traffic.

Mr. D. S. MacColl said there was no one present in favour of the present scheme, but the question was how to kill it. He agreed with Marshal Foch that when the battle seemed lost was a good time to go in and win. In the previous history of this movement, when Waterloo Bridge collapsed, the battle seemed lost. The County Council had condemned the scheme for preserving the old bridge as extremely silly, there only remained some financial question, and a very eminent architect had agreed to be the assessor for the new Waterloo Bridge. The project had, however, been stopped. In the present case the scheme had been passed by the Council, having been practically dictated by the Railway Company, and was on the way to being passed by Parliament, but he did not believe that any one of the three bodies he had named was impregnable. As they had heard, the members of the County Council were extremely doubtful as to whether they had not made a mess of it. He believed the same thing would be found to be the case with the Ministry of Transport, if we knew the state of mind there, and even the Railway Company were in doubt as to whether they had made a good bargain. They had yet to face the extreme disgust of their passengers when these found they were to be dumped on the south side.

Mr. D. Barclay Niven said that if a proper bridge was built at Charing Cross, land on the south side would rise immensely in value.

Professor S. D. Adshead said there should be a good many meetings like the present before the Bill came before Parliament, so as to bring together a stronger opposition.

Mr. J. S. Wilson, speaking as an engineer, said the present problem was not an engineering one, but with regard to what had been said about the difficulties of electrifying the railways of South London, anyone who reflected on what had been done in the last thirty or forty years in London would not be ready to say that even greater things could not be done. There was a great underground railway goods station at Smithfield Market. The very fact that so much was already done underground made, however, a difficulty for new proposals; for there was not now a free field in which to exercise ingenuity.

Mr. William Muirhead said the Charing Cross Bridge problem was one for an engineer and architect—architect included town planner. It should not be a problem for the traffic expert; the bridge ought to be so constructed that no traffic problem arose.

SOCIETIES AND INSTITUTIONS

THE COLLEGE OF ESTATE MANAGEMENT.

In the first of three lectures on urban sanitation delivered at the College of Estate Management, Lincoln's Inn Fields, on January 7, Mr. Edward Willis, M.Inst.C.E., said that a good deal of controversy existed between the users of tar and pitch on the public roads. The tar industry was derived from the gas industry, and in view of the enormous amount of gas now used, there was a tendency towards the use of increasing quantities of tar on the roads. Unfortunately, in some cases, there was a tendency also for this product to depreciate in quality. Genuine coal tar from the ordinary horizontal retorts or the best coke ovens was undoubtedly, when refined, an excellent matrix, but the water-gas tar was not of such high grade.

It was recently reported that the total production of tar now reached two million gallons, a quarter of which was actually used on road works. The lecturer thought this to be very much an under-estimate, but any such figure was an indication of the improvement that had taken place in the road industry since tar and pitch were used, for the result had been to make the roads smooth, comparatively quiet, and resilient. This type of road, if properly laid on a sound foundation, would remain comparatively free from corrugation under normal weather conditions for a considerable time, waterproof, and to a considerable extent shock-absorbing.

Latterly there had been some tendency to drop the use of tar for heavy traffic roads and to concentrate on the natural or synthetic asphalts, of which bitumen was the principal base. The lecturer was of opinion that the tar distillers and pitch refiners had not done sufficient research work to guarantee entirely the quality of bitumen and tar as a permanent road material. The principal professional institutions connected with highways had for some years been thoroughly considering the best specifications for the use of synthetic asphalt and tar, and recently seven specifications had been definitely approved by the British Engineering Standards Association and the Ministry of Transport for the construction of asphalt roads.

One of the most recent improvements in connection with the maintenance of roads, especially for urban communities, was the provision of material to take the place of hot tar or bitumen during the winter months. Treatment had been very effective by means of a mixture of tar or bitumen with an emulsifier and a proportion of water. This material could be used in damp weather when the use of hot tar or bitumen was impossible.

Lecturing at the College of Estate Management, Lincoln's Inn Fields, W.C.2, on January 14, Mr. Edward Willis, M.Inst.C.E., M.I.Mech.E., reviewed urban conditions as affecting the surveyor, and, in dealing with the question of transport, stressed the importance of aviation in that it was likely to affect urban authorities to some extent in the future. Whilst it would be several years before that means of transit took its place among normal means for the middle classes, the aeroplane was already much used by the wealthy and the business man. Looking at the matter from the practical point of view, and bearing in mind that flying was coming to be regarded as one of the safest means of transit, the lecturer contended that it was time some steps were taken by all municipal authorities and important urban authorities either to subsidise private enterprise or themselves make some provision for aerial landing places or aerodromes. The aeroplane or airship could take a straight line from town to town, and thus much valuable time could be saved.

What were the essentials of an aerodrome or site for an airport? Firstly, an area with only slight gradients in one or more directions, and, secondly, in the case of a small aerodrome, a clear space in all directions of at least 600 yards, though a better area would, of course, be from 800 to 1,000 yards in all directions. With such provision no anxiety need be felt as to the landing even of an average pilot of the largest 'plane likely to be used as an air-liner. Thirdly, the soil should be such as not to give unduly, but at the same time, to some extent resilient, with good natural or specially good artificial drainage. The airport should be situated as near as possible to the town or city it was to serve, and be provided with reasonable means of quick motor or rail service. The speaker expressed the opinion that airports should be subsidised by the Government because the average town could not at present afford expenditure in that connection. Whilst it was the surveyor's duty to advise on the sites for aerodromes, it was more than ever essential for the regional town-planning officer to study the whole of his region and anticipate the future by sterilising sufficient areas in suitable positions, so that they might in future become available for progressive means of transport.

WEST YORKSHIRE SOCIETY OF ARCHITECTS.

Mr. G. H. Foggitt presided over a large attendance of members and students at a meeting held at Leeds on January 23, under the joint auspices of this Society and the Leeds College of Art, when an address was given in the lecture theatre of the latter institution by Mr. G. S. Francis, of London, whose subject was "Electric lighting in relation to modern tendencies in architecture." The lecturer remarked that architecture of the past reflected, in external form, the spiritual character of its age, and in like manner, if it was to be true, modern architecture must reflect in its forms the dynamic spirit of contemporary thought and action. In former times men lived by faith, and the interior illumination of their buildings was rightly described as a "dim religious light," but to-day men had to live more by the light of intellect, which prompted them to increase the quality and quantity of illumination in their buildings.

In the later Victorian era, when electric light arrived, no attempt was made to depart from the customary forms and positions of the light fittings; in fact, designers went out of their way to imitate and adapt the old forms to the new method of illumination. Nowadays a departure had been made by employing light in broad masses in place of isolated points, and this had been demanded by more modern architectural forms, and a stimulus toward developments probably dated from the Paris exhibition of 1925; a significant feature being the bold departure from the use of points of high intensity to the use of large masses of low intensity light as a groundwork on which higher light values could be used to emphasise the designer's scheme. The decoration began to show a marked restraint in the use of ornament, and closer attention was paid to the textural effects of materials. Another feature was the evolution of "housing units" for the lamps, which could be incorporated into the structure of the building in the form of ceiling or wall panels, luminous cornices, lintels, and columns, made of some translucent material through which the light could be diffused. To illuminate the exterior of buildings "flood" lighting was now largely used, and formed an inexpensive form of advertisement. Lighting developments of this nature were still in their infancy; some might fall by the way, but others would possess a survival value which would end in artistic expression being achieved.

The lecturer showed many illustrations of exteriors and interiors, exemplifying his remarks, and was accorded a warm vote of thanks for his lecture. A discussion followed in which, among others, Messrs. G. H. Foggitt, J. Addison, Norman Culley, G. L. Broadbent, took part.

MANCHESTER SOCIETY OF ARCHITECTS.

Mr. J. Theo Halliday, President of the Manchester Society of Architects, recently gave a lantern lecture on "Modern Architecture" at the City Art Gallery. Architecture, he said, lay in the essentials of the building, and not in the decorations—the trimmings—and there was nothing in the essentials of modern buildings to bring about a revolution. Trimmings of a building changed with fashion, but the essentials changed only with materials, conditions, and with the great changes that swept over the lives of the people. Referring to Sir Giles Scott's design for Liverpool Cathedral, the lecturer said the spirit of it was entirely of its own time, and its splendour did not come from trimmings but from its strength, solidity, and the scale of the whole conception. The design was fresh and thoroughly sincere. Its interior was perhaps more traditional, although a striking feature was the contrasting of detail with mass.

Several interesting slides were shown of modern American architecture, beginning with the New York Municipal Building with its broad base, its middle of plain office windows, and its ornamented upper story. The growth of skyscraper design was illustrated by the Woolworth Building with its Gothic design, and the New York telephone building, constructed on the set-back principle. The trend of architecture in Europe was illustrated by the Stockholm Town Hall, Einstein's workshop in Germany, and the working-class flats in Vienna, among others. "We cannot claim at this stage," said the lecturer in conclusion, "that there is any clearly defined new movement in architecture. I think that people in a hundred years will look back in vain on 1929 for any strongly marked departure. It is not in our self-conscious attempts to be new, but in our frank treatment of modern problems, that really true modern architecture will emerge." The War, he admitted, had a great effect which could be summed up in the simplification of issues, the earnest desire for sincere expression, and the effort to get down to essentials.

THE ROMANCE OF THE ROMAN FORUM.

Sir Banister Fletcher, P.R.I.B.A., at the Central School of Arts and Crafts on January 15, lecturing on "Roman Architecture," described the plan of ancient Rome on her seven hills, with the famous Forum Romanum in the central valley, and showed some excellent restorations. The Capitoline Hill dominated this public meeting-place on one side, and the Palatine Hill, with its imperial palaces, on the other. The Forum Romanum was the heart of Roman civic life, and held much the same position as the Acropolis of ancient Athens, only that, for the practical Roman, it included the commerce of the city, and was flanked by temples of the gods and courts of justice. Here political demonstrations were held much as nowadays were held in Trafalgar-square, and from the rostrum orators addressed the populace on matters of State and demagogues harangued the "plebs" and instilled the spirit of discontent. Stately colonnades, spacious basilicas, and majestic temples made a fitting setting for the activities of Roman citizens. But the city grew with its growing Empire, and successive emperors, eager to ingratiate themselves with the people, built other forums for the people which rivalled in size, but never in importance, the old Forum Romanum of the citizens. All these forums were monuments to their imperial founders and ornaments to the city. Once hives of human activity, they were now dead sites—broken records of a greatness that has passed. The lecturer also described the Roman temples, which were used for State religion, and were numerous in Rome and throughout the great Roman Empire.

R.I.B.A. SMOKE ABATEMENT REPORT

THE report on smoke abatement, prepared by a sub-committee of the Science Standing Committee of the R.I.B.A., and approved by the Council, has now made its appearance.

This sub-committee was formed in 1927, and the report gives some account of the incidents that led up to its formation. In 1914, Mr. Herbert Samuel, President of the Local Government Board, appointed a Departmental Committee on smoke and noxious vapours abatement, but, in consequence of the War, its operations were suspended, and in January, 1920, Dr. Addison, Minister of Health, re-appointed this committee, and their findings were issued in an interim report in June, 1920, and a final report in December, 1921. Seventeen recommendations were made by this committee, and following these recommendations an Act of Parliament was passed in 1926 to amend the law relating to smoke nuisances.

Of the R.I.B.A. sub-committee's own findings, we take the following extracts :—

"Striking evidence has been given as to the serious damage occasioned to public and other buildings by smoke and other impurities in the atmosphere. The damage is mainly due to the sulphurous and sulphuric acids contained in the products of combustion, but it is pointed out that particles of soot united with these acids materially enhance their injurious effect. The acids become concentrated and the tarry content of the soot makes the mixture more adhesive. In such buildings as the Houses of Parliament, Buckingham Palace, Somerset House, and Chelsea Hospital, what are the normally good weathering stones are being rapidly disintegrated by the acid soot. It has been given in evidence that the upkeep of public monuments and buildings would be reduced by at least one half if a pure and smoke-free atmosphere could be obtained. Sulphuric acid particularly corrodes or disintegrates practically all kinds of building materials. Marble tends to turn green and then black. The absorption of sulphur gases by limestones resulting in the formation of gypsum is, in this country at least, the most potent cause of their decay. In the case even of internal frescoes, the porous surface of the carbonate of lime provides opportunity for the tenacious lodgment of dirt and for the destructive action of the acids. The carbonate is transformed to gypsum. It is so expanded that it loses its binding power while the painting ground is often destroyed. The action of carbon and ash when not associated with tar is not extremely objectionable as the simple process of dusting will remove either. When, however, they are associated with tar, especially in the case of soot, we have the most objectionable kind of dirt. While the soiling effect of soot is by far the most evident to the eye it does not in itself cause the deterioration of building material. This cannot be said of the corroding agents of which sulphuric acid is the most important. The effect of sulphurous acid is nearly as serious as that of sulphuric acid. Ammonia is also dangerous in that it combines with sulphuric acid and ammonia-sulphate has a deleterious action on stone. The action of hydrochloric acid and hydrogen sulphide, though probably of less importance, cannot be dismissed as innocuous.

"Building stones may be divided into two classes :—1. Stones which do not contain the carbonates of calcium and magnesium such as granite, gneiss, and sandstones (in which the grains of sand are cemented together by some substance other than carbonates). 2. Those containing larger or smaller amounts of the carbonates of calcium and magnesium, such as limestones, dolomitic limestones, and sandstones with a calcareous cementing material.

"Stones of Class 1 are but little affected by atmospheric acid. Stones of Class 2 are acted upon by sulphuric acid which attacks the carbonates of calcium and magnesium. Both classes, of course, are disfigured by soot deposits. At the present time no method of preservation is known which will adequately protect those building stones which are liable to attack by deleterious acids; the conditions required to be fulfilled by such solutions are mutually contradictory. Temporary protection can be obtained by the use of certain of the many methods of preservation which have been suggested from time to time during the last eighty years, but the temporary protection so obtained is likely to be followed by an acceleration in the rate of decay. Periodic washing down with water is probably the most effective preventive measure that can be applied in corrosive atmospheres to prevent the accumulation of soot and to keep the stone free from harmful accumulations of disintegrating salts. References should be made on these points to the reports of the Building Research Station. (*The Builder*, Dec. 20, 1929.) Factory chimneys are by no means the chief offenders in emitting smoke which pollutes the atmosphere even in industrial areas. According to the Committee on Smoke and Noxious Vapours Abatement (Ministry of Health) domestic chimneys contribute at the least 50 per cent. of the total smoke nuisance, and at least 6 per cent. of the bituminous coal ordinarily burnt in domestic fireplaces escapes, unconsumed, in the atmosphere as soot. Domestic soot contains a considerably higher percentage of carbon and tar than factory soot, and by reason of its large proportion of tar, it adheres to every object upon which it falls, and is, therefore, more obnoxious and destructive than soot emitted from factories.

Means of Abatement.

"It is obvious that if a fuel could be discovered which would not give off the deleterious matters into the atmosphere, the causes which tend to decay stone and other building materials would be removed and the health of the inhabitants would be improved, more pure sunlight would result, and a greater part of the dirt and dust would be eliminated from our towns. The Government has done much good work in instituting the Fuel Research Board. The Fuel Research Board have been investigating a fuel produced by low temperature carbonisation and about eight firms have entered the market with smokeless coal, of which four are active. Ordinary gas coke, produced by the gas undertakings, is obtained by heating the coal in retorts to a temperature of about 1,200 deg. C. In this process practically all the live gas obtainable is extracted, but the sulphur content of the coal remains, as likewise the ash.

"From the reports of the Fuel Research Board we learn that the coke obtained by the low temperature carbonisation process is produced by heating the coal to about 600 deg. C., and consequently has a higher proportion of gas retained. About three-quarters of the weight of the original coal remains as coke, and is an excellent domestic fuel, clean to handle, and burns evenly for long periods without attention, and more heat is radiated into a room when burning this coke than when burning an equal weight of raw coal in spite of the fact that the coke has a somewhat lower calorific value. It also heats suitably designed ovens and domestic boilers better than raw coal. There still remains, in part at least, the objection which owners of buildings, etc., labour under, namely, that the whole content of sulphur in raw coal is distributed in the atmosphere even when using L.T.C. coke, but the absence of soot (and consequently tar) will not cause it to adhere to buildings as at present, but the sulphur transformed into sulphuric acid will attack stone.

"Alternative methods of heating rooms by gas and electricity as against coal and L.T.C. coke have much to be said in their favour except for the cost, which is, of course, an important item to the average householder. Cooking by gas has been proved to be as economical as by a coal fire, since the latter must be maintained for much longer periods than those actually required, but it is generally considered that cooking by electricity is expensive at the present rate.

"From the smoke prevention point of view there still remains the smoke and gases produced at the source of production of electricity and gas. Also for central heating, oil-fed boilers for hot-water circulation have proved an economical proposition both on fuel and labour and running costs. The sub-committee find that there is at present no economic process by which sulphur can be eliminated from the atmosphere entirely, but the minimum seems to be by the universal use of gas or electricity for heating—the latter being preferable if the cost could be brought within the range of the ordinary householder.

"The sub-committee recommend that the inspectors, mentioned in the findings of the Government Commission, should be urged to be more vigilant in their observations and should fearlessly report to the Ministry of Health on their work, and that local authorities should also be more active and impartial in suppressing both smoke and noxious vapours from industrial premises. The public should be instructed both in the harmful effects of fouling the atmosphere with smoke and noxious gases and also in their civic rights in its prevention, and be invited to stimulate the local authorities in using to their utmost the powers given them in the Act of Parliament. The Royal Institute of British Architects might with advantage organise means to inform the public, and suggest remedies and support any action which would remedy the evil of the smoke nuisance.

Notes for Architects.

"When designing public buildings, such as town halls, libraries, schools, etc., the local authority should see that suitable provision is made for preventing, or reducing to a minimum, the emission of smoke. Where, as will frequently be the case, the whole building is warmed by means of a central heating apparatus, the matter of smoke abatement will be simple, and whether the medium adopted be hot water, steam or warm air, the main consideration in reference to smoke abatement will be to use smokeless fuel, such as coke, anthracite (or oil) in the heater or boiler. There may, however, be parts of buildings or rooms which, on account of their purpose or the limited occasions of their use, cannot conveniently depend on a central heating apparatus. In such cases some other provisions must be made, and the alternatives are (1) the use of gas for heating, (2) the use of electricity, (3) the use of smokeless fuel, or (4) the use of apparatus which is adapted to burn coal with the least necessary smoke. A few suggestions under each of these headings may be made.

(1) *Gas.*—Gas fires for heating rooms occasionally used for limited periods, or for apparatus for heating limited quantities of water not regularly wanted, or for cooking, afford a practicable alternative to the use of raw coal which is free from smoke and usually economical in use. The chief consideration is to provide proper flues or other suitable outlets for the products of combustion, which though not visible, may none the less be dangerous to health if allowed to escape into a room inadequately ventilated.

(2) *Electricity.*—For every potential therm electricity is usually more costly than gas, but electric apparatus for cooking and heating may excel even gas in the accuracy with which the heat can be applied to the spot where it is needed, and in this way may, in some cases and for some purposes, prove both practical and economical.

(3) *Smokeless Fuel.*—There are three such fuels now in use (*a*) anthracite coal, (*b*) ordinary gas coke, and (*c*) modified coke produced by special carbonisation.

(*a*) Anthracite is a dense, hard fuel of generally good quality and high calorific value. It is usually burnt in stoves but will burn in suitable cooking ranges.

(*b*) Coke, weight for weight, when reasonably free from moisture and ash, can be used for heating effects in open sitting-room grates. The efficiency of good coke as a fuel, its relative cheapness, and its freedom from

smoke, together constitute advantages for the sake of which it is worth while to overcome the slight difficulties in regard to its use. As there is little flame to heat up the air entering the chimney flue, that flue should have a good draught. The distance from the top of the fire to the canopy should be rather less than for coal fires, and the fire should not project too far forward to cause risk of any of the products of combustion escaping into the room. The column of fuel should be deep and be well insulated with firebrick, except where exposed to view in front. Grooves or ridges in the firebricks to allow air to pass are useful, and means to regulate the draught both below the fire and above it into the flue are desirable. Means to remove the fine ash which may accumulate without much disturbance of the glowing coke are also desirable.

(c) Modified coke is now being manufactured by commercial firms. When made from washed coals, blended or otherwise, it ignites and burns more readily than ordinary gas coke. There seems prospect that the manufacture of this product will, ere long, give a supply of smokeless fuel less difficult to burn in ordinary grates than coke.

(4) Where, owing to local conditions, the use of raw coal must still be regarded—in spite of the serious objections—as the most suitable or economical fuel to use in open fires or in ranges, something may be effected by selecting grates which at least facilitate the reduction of smoke to a minimum by reasonable stoking, for it is recognised that with open coal fires care in stoking must be by far the largest factor in reducing the production of smoke. Control of air supply to the fire, enclosure with firebrick insulation, overhanging back low enough to be generally hot, not too great in extent, and hollowed to concentrate the products to the centre, are useful features. Probably a suitable grooving of the firebrick assists the supply of air. As regards cooking ranges, the leakage of cold air into the flues should be prevented, and a closed firebrick chamber under the fire through which the regulated air supply can be admitted and where it will be warmed before reaching the coal will be found helpful.

BUILDING PRACTICE—III.

By W. T. CRESWELL, Barrister-at-Law, Hon.A.R.I.B.A., Associate (late Fellow), Surveyors' Institution, etc.

SUPPORT TO BUILDINGS

So long as land is undisturbed, each portion has a natural support from that adjacent to it, either vertically parallel to, or horizontally below it. And therefore the right is conceded to any owner of land to resist any act of an adjoining owner which would rob his land of its natural support.

Excavations.

However, an owner may proceed to excavate up to the extent of his boundary, and if by so doing he causes a wall on his neighbour's land to fall down, that neighbour, in order to recover damages for the injury to his wall, must show that the excavation has actually removed the natural support of the land forming the boundary of his land; or, alternatively, he must prove some Prescriptive or Statutory right to support of the wall itself. And, of course, an owner cannot demand that adjoining land shall remain in its natural state; his right is the benefit of *support only*, and that right is not upset until damage accrues by the withdrawal of that support.

Superimposed Weights.

There is no natural right of support for any weight superimposed on the adjoining land; but if an added weight causes a subsidence in the adjoining owner's land, the latter can claim for the subsidence of the earth, whether it is clear of buildings or not, unless it be proven that the weight of those buildings has been the cause of the subsidence, or contributed largely to its cause.

Support from Adjoining Owner's Building.

Again, adjoining owners of land have no natural right of support from the building on either owner's land for a building on the other. An adjoining owner can pull down his building and take away the support unless there is a Prescriptive or Statutory right of support, and even cause damage thereby to his neighbour's contiguous building, without incurring any liability. He must, of course, use *reasonable* care in pulling down, and he might be held liable if he had had previous notice of the frailty of the building damaged.

Repair of a Supporting Building.

Again, apart from Statute law, an owner is under no obligation to keep in repair a building upon his land to the extent that it shall support the adjoining owner's building. The building may be left in a ruinous state, and eventually collapse, so long as the adjoining owner does not suffer by its fall. To avoid such risk of liability, one owning a ruinous building should take the precaution of shoring it up, so that no injury may be caused to his neighbour.

Minerals.

Inasmuch as every owner of land has a natural right to the support of its surface horizontally, the owner of mining rights, when working underneath, must have sufficient support (which may, however, be of an artificial nature) to maintain the surface in its natural state; and even where a right to obtain minerals is acquired by Statute, there does not follow any right to let down the surface, unless it can be shown that the surface owner has parted with his right of support.

Underground Water.

There is no natural right of support from water underlying an adjoining owner's land. The latter may therefore draw off all his underground water, thereby depriving his neighbour of the support resulting from moist earth which the dried earth ceases to give. This privilege, however, does not extend to other liquids which may have other physical attributes than those shown by water, and the draining off of which liquids may affect the natural support.

Contiguous Houses.

When two buildings have been built contiguous (as in the case of semi-detached houses) and by the same landowner, and the one house enjoys support from the other, if one of the houses is sold, the effect of this original liability of possession is to set up the right to mutual support operating between the two owners by what is known as presumed grant or presumed reservation. For the original owner, when he sells one of the houses, both grants and reserves the right whether the houses are sold at one or at separate times.

Preservation of Ancient Plymouth.

An idea for the formation of an Old Plymouth Society, conceived chiefly in the mind of Sir Philip Pilditch, M.P., a Plymouth man by birth, was brought to reality at a meeting of the members of the committee of the Old Plymouth fund, who are responsible for the restoration of the Elizabethan house at 32, New-street, adjoining the Barbican, a work which is expected to be completed by the end of May. The object of the society, of which Mr. A. S. Parker will be secretary, is the preservation of the remaining antiquities of Plymouth.

LONDON SOCIETY

In the course of a lecture on "London's Parks and Open Spaces," read before the London Society on Friday last (Dame Beatrix Lyall in the chair), Mr. F. W. Parker, F.S.I., gave some interesting facts regarding the history of London's municipal open spaces. This commenced really in 1855, when the Metropolitan Board of Works was brought into being. Prior to that there was no central authority to look after the needs as regards recreation or other matters affecting the populous districts of the London which had extended beyond the City borders. The Royal Parks sufficed for a population of under 2½ millions, but as building increased alarm began to be felt at the gradual absorbtion of unbuilt-on areas for housing accommodation. One of the earliest acts of the new Board was to seek to provide parks and recreation grounds in neighbourhoods where they were most wanted. Technical difficulties delayed until 1857 Parliamentary sanction for the park which had been proposed for Finsbury—a district particularly deficient in open spaces. Even then, the Board's troubles were not at an end for, owing to the non-materialisation of a Government grant, a smaller area of land had to be purchased—now known as Finsbury Park. The 63 acres of Southwark Park were next dedicated to public use, although the Act authorising its formation was not passed until 1864.

The number of open spaces was considerably increased by the passing of legislation in 1866, which secured for public use the many and extensive London commons. These were, said the lecturer, the only relics, almost, of the feudal systems, and took back the mind to those still earlier times when England was tilled in common by village communities. Prior to 1866, the only legal rights in these lands were those of the lords of the manors and of the copyholders and commoners, and such lands were open only to the rest of the public by custom. Their value was mainly as grazing land, but with the increase of population they were not able to furnish food for the cattle of all the manorial tenants and their agricultural value went down as their value for building and railway development increased. There was no doubt that most of them would have disappeared but for the action of the late Board and the public-spirited work of the founder of the Commons and Footpaths Preservation Society, who eventually secured the passing of the Metropolitan Commons Act, 1855, which laid down a mode of procedure which secured, amongst others, Clapham, Wandsworth, Tooting, Streatham, Blackheath, Bostall Heath, the Hackney Commons, Shepherd's Bush, Brook Green, Eel Brook Common and Parsons Green.

One other Act bearing upon the open spaces of the Metropolis should be mentioned, the Disused Burial Grounds Act, 1884, which prevented, with small exceptions, the erection of buildings on land set aside for interments. By the Open Spaces Act of 1887 this prohibition was materially extended so as to include such lands, whether closed for burials or not. There were 362 of such grounds in the County of London and about 100 of them were now used for public recreation.

On the question of the use to which open spaces were put, the lecturer placed in the forefront cricket, football and lawn-tennis. A special provision for children was a paddling pond of shallow depth, while no modern park was complete without a children's gymnasium, including merry-go-rounds, see-saws, etc.

In conclusion, said the lecturer, the number of parks was being increased from year to year as the opportunity offered. Before long it was hoped that the historic and beautiful area of 214 acres known as Lesness Abbey would be added, while the ultimate acquisition of Bethlem Hospital (to be called the Mary Geraldine Harmsworth Park) was assured owing to the liberality of Lord Rothermere, who would still further earn the gratitude of London if his scheme for securing the site of the Foundling Hospital was crowned with success.

ARCHITECTS' & BUILDERS' INQUIRY BUREAU

We are glad to give questions and answers, but cannot accept responsibility for contributed replies, especially on legal matters.

May we appeal to our correspondents to submit their queries on paper of a size easily filed, and written as legibly as possible, or, better still, in typewriting?—ED.

Dry Rot.

On behalf of a correspondent we recently forwarded to the Forest Products Research Laboratory a sample of wood infected with dry rot. Commenting upon this, one of the officials of the Laboratory writes as follows: "The sample of wood shows very advanced decay due to the attack of *Merulius Lacrymans*, the dry rot fungus. . . . In treatment, the whole of the infected timber should be removed and burnt; particular care being taken to remove all the odd small infected pieces such as fixing blocks, etc. When cutting away infected wood, always remove the apparently sound timber for a distance of 18 in. beyond the last visible signs of attack. The walls and all brickwork exposed must be sterilised as well as any sound timber that is left in. The former may be sterilised by the vigorous use of a blowlamp or by means of an antiseptic. The strands or "roots" (mentioned by our correspondent) are capable of penetrating the brickwork for some distance and are hard to kill.

"Suitable antiseptics for use on walls and timber, which should be heavily dressed with the liquid, preferably applied hot, are: creosote or one of the proprietary tar oil preservatives, or a 5 per cent. solution of acid magnesium silico-fluoride (avoid contact with glass or metal) or of sodium fluoride. The whole of the new timber for replacements should be thoroughly treated with preservatives on all sides. Dry rot cannot attack wood that is perfectly dry unless it is already well established on neighbouring timber. Hence, particular attention must be paid to the elimination of all possible sources of dampness, and the ventilation to the timber increased as far as possible. (Note: A dampcourse may be rendered inoperative by the heaping up of soil against the outside wall.)

"The work of removal and sterilisation must be carried out thoroughly, as further trouble is certain to arise if traces of infection are left, as these will develop should conditions again become favourable for the growth of the fungus. Further details *re* recognition of the forms of dry rot and the remedial measures to be adopted may be obtained from the bulletin, 'Dry Rot in Wood,' published by H.M. Stationery Office, price 1s. 6d."

Notices on Works.

SIR,—I am a clerk of works under a borough council and have charge of the erection of 54 houses. A local builder is the contractor. Will you kindly inform me:—

1. Is he bound to have posted any notices upon the job? He has none at his works.
2. What are the actual Acts under which he is liable as to scaffolding, etc., and to have posted on jobs?
3. Is he bound to have first-aid appliance upon the job?
4. Any other information appreciated.

B.

[Under the Workshop and Factory Act, 1901, no notices are required to be affixed in respect to domestic factories and workshops, nor in men's workshops; but the owner must observe the provisions of the Act as to fixing notices in tenement factories in respect to the period of employment, times for meals and system of employment of children.

Under section 128 of the Act, notices have to be affixed at the entrance of every factory and workshop, and where else directed by an inspector under the Act, giving:—

(*a*) The prescribed abstract of the Act.
(*b*) The name and address of the inspector.
(*c*) The name and address of the certifying surgeon for the district.
(*d*) The clock by which the period of employment and time for meals are regulated.

Section 29 of the Workmen's Compensation Act, 1923, provides that first-aid and ambulance and safety orders must be provided in every factory.

In general, the works described by the inquirer cannot be said to come within the definition of a workshop or factory.]

Damp Walls.

[REPLY TO "PLUVIUS," JANUARY 10.]

SIR,—As an alternative to the methods suggested in your issue of January 10, would linseed oil and varnish painted on the outside walls facing weather be effective? The walls are 9 in. thick. Or again, could waterproof cement mortar be applied equally well on walls of room already plastered?

INTERESTED.

Sound Insulation.

SIR,—I have just built a new room on to a lodge on an estate, with a day nursery over. The ground-floor room is used as a study, and it was very important that any noise from the nursery over should be lessened as much as possible. For this purpose the joists were filled for a depth of 6 in. with slag wool, well stamped down. Unfortunately, this has not had the desired effect, and every sound is heard, even to hearing what people are discussing, from one room or the other. Following are some particulars of construction, etc.:—The rooms are 27 ft. by 15 ft., built of 11 in. cavity walls in cement, 9 ft. 6 in. high in the clear.

The plaster on walls is Portland cement rendered finished with Parian. The joists are 9 in. by 2 in., 12 in. apart, and bridged, filled in 6 in. deep with slag wool. The floor boards are covered with cork lino, which appears to be fastened to the floor boards with some solution.

J. G. G.

Building Line Question.

SIR,—A local council seeks to impose upon a flank wall of a house the provisions of the Public Health (Buildings in Streets) Act, 1888, Section 3, wherein it forbids any building beyond the *front main wall* of the house or building on either side thereof *in the same street*. I contend that this refers only to the front main wall of the house in the street where it is being erected, and not a side or flank wall, which is not mentioned in the Act, though the council say that the house faces on two streets. The building line of the side street is 20 ft., but the council are prepared to accept 10 ft. If the Act applies, I say they have no authority to give way, and therefore it cannot apply. I stand to lose at least 20 ft. building frontage at each side street, and shall be glad to receive any views on the matter before considering further action.

S. S.

Floor Question.

[REPLY TO "MILANDER," JANUARY 17.]

SIR,—I would suggest providing the filling up to existing level of hard core or other dry substance. A 4-in. bed of concrete with 3-in. by 2-in. joists laid on surface, fixed with clips, would be a safe and economical method to adopt. This would permit a current of air to circulate under the boards. You would, of course, have to provide a fresh-air inlet and outlet, and creosote the underside of the timber; but there is danger of dry rot taking place if the joists are bedded in wet concrete.

R. WIG.

Cracks in Bungalow Ceilings.

SIR,—Can you tell me the best treatment for the ceilings of a bungalow that, built four years ago, have recently developed many cracks? The ceilings are of ordinary lath and plaster and have been distempered once; they are not boarded overhead.

AUTOLYCUS.

Re-pointing Problem.

SIR,—I notice that Dr. Stradling, in his lecture at the Architectural Association on "The Work of the Building Research Station," stated that when a brick wall is re-pointed with Portland cement the pointing sometimes remains but the bricks are gradually destroyed. Would Dr. Stradling say whether this applies to any sort of brick? I can understand the effect being produced in soft bricks, but should have thought that hard bricks, such as London stocks, would be immune.

BUILDER.

Picture Rails.

SIR,—The sunk picture rail illustrated in your last issue is very typical of modern methods for concealing rather than eliminating dust-holding surfaces. Some time ago I asked the operating theatre sister of a certain hospital why she preferred a certain wall surface to plain enamelled paint. I pointed out that dust was as likely to settle on one as the other. "Yes," she agreed; "but you don't see it, and it saves a lot of cleaning!"

A. SAXON SNELL.

Pointing Georgian Building.

[REPLY TO "N. D.," JANUARY 17.]

SIR,—Very few mortar joints over one hundred years old remain on the face as they were first rendered. Some have been raked out and pointed, and some have been filled in and tuck-pointed. My own opinion, from observations in a Georgian town, is that the usual habit, in this district at any rate, was to rule the joints in with a jointer, probably as the work proceeded; but this work may be of more recent date. Probably the best treatment for new fronts in a similar manner is to use not too fat a joint (say ¼ in.), and to wipe it off flush with a rag as the bricks are laid. This makes a good joint and is preferable structurally to any method which involves raking out and pointing in under pressure.

METHOD.

Waterproofing Damp Wall.

[REPLY TO "X. Y. Z., TRANSPORT, LTD.," JANUARY 17.]

SIR,—Waterproofing with a colourless petrifying liquid is practically the only treatment to adopt, and is also the cheapest and best. A type of liquid which is laid on in two different coats reacting chemically upon one another is preferable, as other types are apt to wash off in time, and cease to function.

SEALIT.

Damp Walls and the Remedy.

[REPLY TO "G. B.," JANUARY 17.]

SIR,—If by "stud walls" your correspondent means a lining of timber studding against an outer solid wall, and lath and plastered, I think he is begging the question. Dampness is not only a matter of disfigured decorations, but also of health, and the fact that the dampness does not show itself does not make it any the less undesirable. This form of construction is also liable to set up dry rot, and it is also relatively expensive, involving as it does the cost of the studding and the cost of the lathing over that of a solid wall, which can be built in cavity fashion at a trifling extra cost. Cavity walls built with extreme care and supervision, and with all due precautions round jambs of openings and over lintols, remain the one sure way of securing weather resistance at low cost.

CAVITY.

[Several inquiries and answers are held over.]

THE BUILDING TRADE

THE USE AND ABUSE OF BUILDING MATERIALS—IV

By A. M. GILES, B.Sc., A.I.Struct.E., A.M.I.E.E.

BRICKS.

History.—Right down through the ages to the present time the use of bricks, as a building material, makes an interesting tale. Its origin dates back many, many centuries, for we learn that it is almost 4,000 years ago that brick-making was an important occupation of the Egyptians. Further, it is reported that a brick, made of Nile mud, sand, and chopped straw—16 in. long, 4 in. wide, and 3 in. thick—was found in the ruins of the Pyramid of Dashour. Bricks were used extensively by the Romans, and it has been suggested that their introduction into Britain took place during the Roman occupation—somewhere about the fifth century.

The improvements in the making of bricks have been fairly continuous, and, during the Tudor period, brick-making had reached a very high level, particularly with respect to the ornamental variety. As testimony of the lasting quality as well as the thoroughness with which the bricks were made during that period there still exist some wonderful examples of brick buildings erected about that time, principally in the Eastern Counties, though the Lollards' Tower at Lambeth, and part of Hampton Court are found in the London district.

Though, nowadays, bricks are in the main machine-made, it is still maintained by many people that hand-made bricks are far and away superior. Naturally, to keep pace with the times, the making of bricks has had to be speeded up so that one is safe in saying that wherever there is an easily obtained supply of the requisite kind of clay, close by will be found a brick factory.

Clay—Its Origin and Composition.—To consider in detail the origin and composition of the clay used in brick-making would take far more time and space than seems necessary in a brief description of bricks as a building material. There are, however, a few items of information that may be of much interest to those concerned. For those who would like to pursue the subject further, there are such text-books as "Clays: Their Occurrence, Properties, and Uses," by H. Ries, and "The Clay Workers' Handbook," by A. B. Searle.

Putting it as simply as possible, clays are the result of the disintegration of igneous rocks. By some this is said to be brought about by simple weathering, *i.e.*, by the action of varying atmospheric conditions, while others suggest that it is caused by the action of certain gases which find their way through the rocks from the inside of the earth. Certainly the latter explanation helps one to understand why it is that in some places there are such deep clay beds.

Whatever the method of disintegration, the resulting particles are very tiny. Seger defines clay substance as consisting of particles of less than 0.004 in. in diameter. This helps us to realise how the particles can be carried along by moving water and deposited in various places, such as the mouth of a river or at the bottom of an inland lake. The famous London clay is said to have been deposited in this way. Clays deposited thus are generally called "transported clays." It is from these, more than from any other, that ordinary bricks are made. The clay is deposited in beds, layers, or strata just as were the sedimentary rocks mentioned in the articles on "Building Stones."

The composition of clay is, perhaps, of particular interest in view of the amount of discussion and argument that is still going on about "salting" of brickwork. Many chemists have analysed clay many times and, in general, their results show that it consists of fine particles of silica (SiO_2) combined with alumina (Al_2O_3), magnesia (MgO), ferric oxide (Fe_2O_3), lime (CaO), water (H_2O), the alkalis potash and soda (K_2O and Na_2O), as well as small quantities of carbon dioxide (CO_2), and sulphur trioxide (SO_3).

Generally speaking, a good earth that can be used for brick-making should contain about half its weight of real clay matter, i.e., its chemical analysis should show not more than 75 per cent. of silica and at least 20 per cent. of alumina. If it contains more than 4 or 5 per cent. of ferric oxide the kiln result will be a red brick. By clay matter is meant the fine particles formed by the disintegration of the felspar constituent of such igneous rocks as granite. Some bricks are made of a mixture of shale and chalk—known as "marl." The shale is a hardened form of clay brought about by compression due to earth or rock movement. If compressed still more it is found as slate. Bricks may also be made from "loam," which is a mixture of clay and sand.

Bricks, of course, are only one of the products of what is often called "structural clay." They may be either building, paving, or fire brick, according to the manufacturing details. It must not be imagined that bricks are the only clay product, for it is only necessary to mention such things as tiles, drain and sewer pipes, and all kinds of earthenware and pottery as well as china. The clays, formed by the disintegration of deep-lying rocks, are known as "residual clay," and it is from this that china and pottery are manufactured.

Physical Properties of Clay.—The characteristic properties of a brick, the one of the clay products that we are considering, depend more or less upon the physical properties of the clay. Further, to ensure good brick products, it is realised that the clay should possess very definite physical properties. According to Ries, the value of clay depends upon such properties as plasticity, tensile strength, shrinkage, porosity, fusibility, etc. Among these, plasticity is certainly the most important, and it seems strange that at present there is no really satisfactory method of determining its value. By some it is defined as the property of being easily worked and moulded into shape, while others say that it is the property of wetted clay which resists cracking when it is in any way deformed. It is interesting to note that the worker in a brick factory tests the plasticity of the clay by feeling it with his fingers. Tensile strength is also an important physical property since the clay has to undergo several varying stresses during the process of its manufacture into bricks. The tensile strength will, of course, depend upon the composition of the clay, and may vary from 400 lb. per sq. in. to practically nothing.

It would seem that since the resulting bricks have to be of a more or less uniform size, shrinkage is also of some importance. This property, to a certain extent, depends upon the size of the pores within the clay as well as upon the amount of water mixed with it. The addition of a small quantity of sand decreases the shrinkage, but, unfortunately perhaps, though it helps the drying process it also increases the porosity. Since the rate of drying of the clay is of importance, it is as well to know that porosity has a considerable effect upon it. Porosity is sometimes defined as the ratio of the spaces of the pores to the volume of the dry material, therefore it influences largely the amount of water required to render the clay plastic. Finally, fusibility is of some importance also, since it is agreed that clay for brick-making should fuse or soften at a comparatively low temperature. It is known that fusion takes place in three stages, or at three different temperatures, viz., the incipient, the complete, and the viscous vitrification, and many tests are carried out for the purpose of finding just when these occur for any particular flux used.

Manufacture.—Of the many processes involved in the manufacture of bricks there are some of much importance, since the quality of the resulting brick is a fair indication of both the care with which the processes have been conducted as well as the selection and preparation of the clay. The preparation of the clay naturally depends upon the source from which it is obtained. In the case of the hard shales it has to be crushed, while in other cases it is suggested that there is an advantage in weathering the clay by spreading it out in layers from 18 in. to 2 ft. thick before using it, since it breaks down the iron compounds that are found in it. In any case flints and pieces of limestone should be removed during the crushing process, or by screening, or even by treatment in the wash-mill or pug-mill.

The most injurious impurity is limestone, though a small percentage of this is considered to be an advantage since it assists vitrification. Certainly no particles more than one-sixteenth of an inch in diameter should be left, otherwise we get the white spots so often found in the poorer class brick. Besides, when moisture comes into contact with these spots—which are really portions of quicklime—slacking takes place and this, giving rise to expansion, causes the brick to crack.

Tempering.—The adding of water to the prepared clay is called "tempering" it. Though it seems a very simple process, nevertheless it has an important bearing upon the finished article. In most cases sufficient water has to be added to render the clay plastic. For instance, in the case of the wire-cut brick the correct plasticity is very important, whereas the popular "Fletton" brick is pressed into shape when the clay is very nearly dry.

We are told that shrinkage, to a large extent, depends upon the tempering, and, because shrinkage during drying and burning should not exceed more than about 8 per cent., a little sand is sometimes added, particularly if the clay is what is termed too "rich," otherwise it would shrink and twist badly in the drying.

Drying and Burning.—The ordinary user of bricks does not concern himself with the methods of moulding them, though the appearance and properties of the finished brick tell him much about the drying and burning processes. After the brick is moulded the drying process begins. This means getting rid of the moisture which may be present in any amount up to 30 per cent. Since evaporation takes place at the surface first, the inside will be subject to certain stresses which tend to twist and deform the brick generally. Many brickyards still arrange for the drying to be done by the sun and the wind, though improved methods of artificial drying are much on the increase. These naturally make for a more uniform and continuous process. They consist of the oven or hot-floor drier, and the tunnel drier. The latter seems the more efficient. It tends to be continuous, because the moulded bricks can be fed in at one end, and the dried products removed at the other.

The temperature used in these drying machines is about 250 deg. F., and the process takes anything up to three days, which time naturally depends upon the condition of the clay, and, of course, the drying temperature.

Next come the "burning" or kiln operations. These have to be carried out most carefully, and, in order to ensure good products, the heating and temperature arrangements have to be well supervised. During the increasing temperature changes different processes take place. The first is the "water-smoking," or dehydration stage. The water that remained in the pores of the dried brick is now driven off; also, during this stage any organic matter that was in the clay will now be completely burned and reduced to charcoal or carbon. The temperature reached during this process is about 1,300 deg. F., and much care has to be taken that the heating is not too rapid, or cracking and bursting of the bricks may take place.

The next temperature stage, between 1,300 deg. F. and 1,650 deg. F., is called the oxidation phase. During this stage large quantities of gas are given off. These consist mainly of the oxides of carbon and sulphur, as a result of the oxidation of the carbon formed during the first process, and of the sulphur in the compounds in the original clay. It is necessary that the temperature shall not be allowed to rise above 1,650 deg. F. until all the gases have been driven off, otherwise the iron compounds do not get completely oxidised, and instead of the bricks having a uniform colour they would have a black or dark-coloured core, and this, to the buyer, is a sufficient indication that the oxidation process was not efficiently carried out.

The final stage is the vitrification or fusion process. This takes place between the temperatures of 1,650 deg. F. and 2,200 deg. F. During this process the bricks become soft and spongy. It is generally divided into three stages, which are defined by Ries as incipient or beginning of fusion, followed by vitrification, and then by the viscous or treacly condition. Naturally, the products of the kiln operations will be largely decided by the particular stage of the vitrification process to which the "burn" is taken. For ordinary bricks the incipient stage is quite sufficient, while for earthenware the vitrification stage must be reached. It is seldom necessary to attain the viscous stage, as too much softening would cause alteration in the shape of the bricks.

It is rather interesting to find that the temperature at any stage during the kiln operations is measureed by the fusing point of certain clay mixes. The temperature of the fusion of these mixes depends upon their composition, and is fairly definite for any particular mix. Cones, called "Seger cones," are made of the particular composition required, and, by the observation of their fusing point, when they are placed in the kiln, the temperature is measured.

Care during the cooling or "annealing" stage is of as much importance as during the "burning," if not more so. A good "burn" may be completely spoiled by lack of proper care during cooling. It should be slow and uniform. To fall suddenly from 2,000 deg. F. to ordinary temperatures would be disastrous. One is easily able to discern, by irregular shapes and cracked bricks, that sufficient care has not been given to the cooling process.

Merchandise Marks Inquiry.

The Standing Committee appointed by the Board of Trade will hold an inquiry at 11.30 a.m. on Monday, February 3, and at 10.30 a.m. on Tuesday, February 4, as to whether imported bolts, nuts and rivets, set screws and head coach screws, boilermakers' and engineers' studs, should be required to bear an indication of origin. The inquiry will be held at the Board of Trade Offices, Great George-street, London, S.W.1.

IMPROVEMENT SCHEMES UNDER THE HOUSING ACT

In our issue for January 18, 1929, we very briefly noted the decision in Rex *v.* Minister of Health *ex parte* Davis, a case since carried to the Court of Appeal and reported 1929 1 K.B. 619, where the question to be determined was whether an improvement scheme under the Housing Act, 1925, was a valid scheme, and whether, if invalid, a writ of prohibition would lie to prevent the Minister of Health from confirming it. The scheme in question as summarised by the Master of the Rolls in his judgment was as follows:—The proposals in the first place provided for the acquisition of certain lands in the area and that after obtaining possession of them the Council should (except in so far as the Minister should otherwise direct) cause all the buildings to be demolished and the sites to be cleared, but then followed two paragraphs upon which the whole question turned: "The whole of the cleared area shall be sold, leased or otherwise disposed of as the Council may think fit, or may be appropriated or used by the corporation for any purpose approved by the Minister of Health—provided that on any such appropriation or user, the value of the land appropriated, or a proper payment as the case may be in respect of the use of the land shall be credited towards the cost of the scheme. If the Minister so requires the council will provide a number of dwellings not exceeding 72 suitable for the accommodation of persons of the working classes on a site either within or without the limits of the area, according to a scheme to be approved by the Minister."

The Master of the Rolls traced the successive stages provided for in Part II of the Act, commencing with section 35. First the official representation made either by the medical officer of health on his own responsibility (section 36 (1)) or on the complaint of any justice of the peace acting within the district or of any four or more local government electors in the district (section 36 (2)), then the formulation of the scheme under section 35, which he held must indicate a possible scheme for the reconstruction of the streets and houses though of a general nature without full practical details; the obligation of the authority to make a scheme forthwith (section 35); the provisions of section 38 as to plans and particulars and estimates and the provisions as to compensation (section 46), and he specially pointed out that in his judgment the scheme as made by the local authority was not different from the scheme formulated by the medical officer, and the conclusion he arrived at was "that an 'improvement scheme' or 'scheme for the improvement of the area' must contain provisions for the user of the land when it has been acquired and that a proposal to acquire sites in an area leaving open the question as to its subsequent user till after the Minister had given expression to the purpose for which it should be used is not a scheme that complies with the Act." Lord Justice Lawrence is reported as having said: "Having regard to the provisions of Part II of the Act" (which he also carefully analysed) "I have come to the conclusion that the Legislature did not intend to confer upon local authorities the power compulsorily to acquire large areas of land in towns on the representation of their medical officer and then after having cleared such areas to deal with the land so acquired at their own will and pleasure." Lord Justice Greer said: "Section 35 in my judgment contains a statutory definition of an improvement scheme as 'a scheme for the rearrangement and reconstruction of the streets and houses in the area or some such streets or houses. Any reading of section 35 which would be consistent with an improvement scheme providing that the area should be a playground or open space would in my judgment be not only contrary to the express words of the section but would also be inconsistent with section 38 (c), which requires the scheme to make provision for proper sanitary arrangements." Thus the Court of Appeal affirmed the decision of the court below that the rule nisi for prohibition should be made absolute.

Now it is to be noted that the question of prohibition arose under section 40, subsection (1), which provides "Upon compliance with the foregoing provisions with respect to the publication of an advertisement and the services of notices (see section 39) the local authority shall present a petition to the Minister praying that an order may be made confirming such scheme." Subsection (3) then provides that the Minister after considering the petition may cause a local inquiry to be held, and if satisfied on the report thereon that the circumstances are such as to justify the making of the scheme and that the carrying into effect of the scheme either absolutely or subject to conditions or modifications would be beneficial to the health of the inhabitants of the area in question or of the neighbouring dwelling houses, may by order confirm the scheme with or without such conditions or modifications, so, however, that no addition shall be made to the lands proposed in the scheme to be taken compulsorily. Then subsection (5) provides "The order of the Minister when made shall have effect as if enacted in this Act."

Now in the case we have been considering, Rex *v.* Minister of Health *ex parte* Davis, the objection to the scheme was taken when under section 40, subsection (1), the petition was first presented to the Minister, but in the recent case Rex *v.* Minister of Health *ex parte* Yaffe (the judgments of the Divisional Court in which will be found in *The Times*, January 15, 1930), a scheme had been submitted to the Minister which contained no provision for the rearrangement or reconstruction of the streets or houses, and which it appears would have been bad under the holding of the Court of Appeal in *ex parte* Davis, but no objection had been taken at that stage and the Minister, under subsection (3), had ordered a public inquiry to be held and the scheme had been modified, and then the order had been made, and only then was a writ of *certiorari* applied for, that the order should be quashed on the ground that the scheme was never a valid scheme, and that thus the inquiry was void and that a clause purporting to incorporate in the scheme plans to be made subsequently by the council and approved by the Minister was *ultra vires*.

The case raised a question of some importance, since it involved the point whether under subsection (5) the confirmation of a scheme whether good or bad by the Minister gives it the effect of an Act of Parliament. We must defer a detailed consideration of this question until the case is more fully reported. The Divisional Court was divided in opinion, but the majority held that the order of the Minister, confirming the scheme, could not be quashed. The Lord Chief Justice appears to have based his judgment on the ground that although it was admitted that this scheme was of such a kind that had steps been taken before the order of the Minister was made, the Minister could have been prohibited from making the order, as in *ex parte* Davis, inasmuch as the scheme when modified was one which would not have contravened the Act, subsection (5) of the Act sufficed to cover the irregularities that had preceded the order.

Mr. Justice Talbot held apparently that, when the order was made in pursuance of

the Act confirming the scheme, the scheme under subsection (5) became of statutory force, basing this opinion upon certain expressions used in *ex parte* Davis by the Lord Chief Justice and Mr. Justice Avory when that case was before them in the Divisional Court, but not alluded to in the Court of Appeal.

Mr. Justice Swift delivered a dissentient judgment, and apparently he expressed the opinion that, although if an order had been duly made under subsection (3) after the inquiry, then subsection (5) would operate to give it statutory force, it was a question here whether, as a matter of fact, any such order had ever been made in compliance with the provisions of the Act. For, before the order could be made, all the preliminary steps should be taken; but that was not the case here, for it was clear that the scheme embodied in the order was not the scheme forwarded by the Town Clerk to the Minister, and it was equally clear that what was forwarded by the Town Clerk was not a scheme under the Act at all, and thus, when the local inquiry was held, there was no valid scheme in existence to be inquired into, and after the scheme came into existence, as embodied in the order, no public inquiry had been held, and he held that in such circumstances the subsection did not preclude the courts from inquiring whether, as a matter of fact, an order which was to have the force it would have, as if enacted in an Act of Parliament, had been validly made.

Until the case is reported at full length, it is impossible to do more than give an imperfect summary of the substance and effect of the judgments, but it will be seen that the case raises very important questions. It is becoming customary to give the heads of State departments very wide powers, which can be embodied in orders sometimes of a legislative character, but section 40, subsection (5), has gone further than this by giving the order when once made statutory force. It appears a somewhat serious proposition that the courts cannot inquire into how the order was made, but must accept it as of statutory force if simply received from the Minister who made it.

In this case it was not disputed that the scheme in its first stages was not an improvement scheme at all within the decision of the Court of Appeal in *in re* Davis, and that at an earlier stage the Minister could have been prohibited from making an order; but it appears that, in passing through the various stages prescribed by the Legislature, presumably for the protection of the public, it had become at a later stage such a scheme as it should have been when started on its career. The public cannot be expected in such matters to protect its own interests and take every objection precisely at each stage, and in such an imperfect scheme objectionable grounds are not even disclosed. The Legislature has, in fact, provided those stages for its protection, and it appears a serious matter, if informality can be set right at the last stage, or even possibly not at all, and yet a Minister's order is to have the authority of an Act of Parliament, although the express provisions of the Act under which that order is made have not been complied with.

Bradford Improvements.

The Bradford Town Clerk has received intimation from the Ministry of Health that sanction has been given to proposals contained in sections two and three of the Bradford Central Area Improvements scheme. The first involved the estimated expenditure of £200,000 for the construction of a building on the site bounded by Market-street, Bridge-street, Leeds-road, and New Bank-street. The second building in connection with the scheme will occupy a site in New Bank-street, which is now a car-park, at a cost of £40,000. The plans are being prepared by the city architect, Mr. Walter Williamson, F.R.I.B.A., Town Hall, Bradford.

BUILDERS' MEETINGS

The annual dinner of the Newcastle and Tyne District Building Trades Employers' Association was held at the Oxford Galleries Restaurant on Friday last. Among those present were :—Mr. R. Jackson, President, the Lord Mayor of Newcastle, Councillor J. Stephenson, Alderman W. Hall, Mr. J. W. Rutter, President of the Northern Counties Federation, and many others. Replying to the toast of building industry, Alderman W. Hall said builders were ready to provide homes for the people, preferably of the owner-occupier type, but they were exceedingly sorry that present-day legislation to a very large extent debarred them from doing so. He thought it was a great mistake to grant the subsidy only where the houses were to remain under municipal ownership. He had also been amazed to find how frequently local authorities were seeking to deprive the private builder of his interest in building work by taking up the question and pursuing that aspect known as direct labour. Works departments were being set up, and work was being done without estimates being asked for. This proceeding was not only inimical to the interests of the builder but contrary also to the interests of the community. This country and Empire had both been built by private enterprise, and he trusted the day would not come when in commerce and business we should be ruled altogether by Government departments. He urged them to fight earnestly this tendency wherever it appeared.

Presenting the report at the annual meeting of the Weston-super-Mare Master Builders' Association, the secretary, Captain Frampton, said there was now a membership of 26. Relations with the operatives were better than they had ever been, which was due to the existence of the local joint committee. There was a long discussion in connection with a letter from the local architects on the questions of bills of quantities and tendering by unaffiliated builders and it was decided to appoint a committee to go into the matter and prepare a report for due consideration. Mr. Sprake was re-elected President, and Mr. C. Geeve vice-president. Captain Frampton was appointed secretary, and Mr. A. E. Lock treasurer.

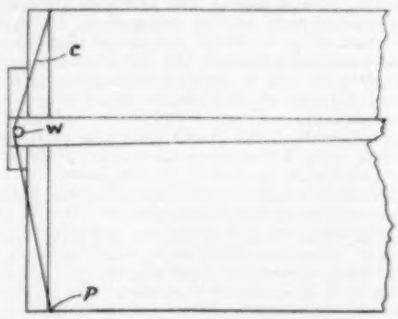
THE ARCHITECTURE OF SPEED.

Lest any reader should have missed "The Column" which Messrs. Carters have created for themselves in our advertisement pages, we bring to his notice the article in this issue entitled *An Architecture of Speed*. We have always had in Britain an architecture expressive of water, for nothing has so influenced our building, nor given to it half so many details, as has the rain. The gutter, the gargoyle, the down-pipe, the cornice, the bargeboard, the hood moulding, the pediment, the cill—these are features having no part at all in the essential structure, and, if the wind had to be thought of as much as the rain, there would arise as naturally an architecture of the wind.

But on our great roads a new architecture may develop, says the columnist : "an architecture of speed. An architecture whose lines will flow by the eyes of the racing motorist as do telegraph wires seen from a train ; an architecture no longer of the sky, but of the road, clinging to it like a contour, and developing itself lengthwise where hitherto, by the patient laying of brick upon brick, stone upon stone, in every tower and in every spire, it had always climbed." The Firestone Building, for which Messrs. Wallis Gilbert & Partners were the architects, is given as an early instance of this "architecture of speed." It is the genius of the modern architect that he should be as responsive to, and yet as critical of, every influence as is a good Government.

A SIMPLE CLAMP FOR T-SQUARES

The practice of using a drawing-board at a steep angle, while of great assistance in "top of the board" work, makes it necessary to use some device for holding the head of the T-square hard against the edge of the board. There are many such devices on the market, but the writer has found the simple home-made arrangement, shown in the accompanying sketch, quite satisfactory in action. The sketch is almost self-explanatory. The T-square is shown on a drawing-board and a small brass sheave is mounted on a wood screw on the head of the square at *W*. A piece of strong cord has a loop spliced on its end at *P*, or preferably a brass ring may be attached to the cord, and is hooked over a small hook on the lower edge, or back, of the board, about 2 in. from the left edge. To the other end of this cord a piece of elastic—such as is used by boys for catapults—is attached, and this is firmly fixed to the upper edge or back of the board, about 2 in. from the left edge. The cord is



made of such a length that the elastic is under fair tension when the lower end is hooked on to the bottom of the board, and when in use the cord is passed over the sheave, as shown, thus increasing the tension and firmly holding the T-square head against the board, and at the same time allowing the free sliding of the square along the edge of the board. The square may be removed easily by unhooking the lower end of the cord which, when not in use, is allowed to hang from the elastic at the back of the board.

The sheave may be purchased from any ironmonger, and the elastic is easily procured, the only other material needed being a short piece of cord, a round-headed screw to carry the sheave, a screw eye to hold the elastic on the top back of the board, and a screw hook to hold the lower end. The expense is therefore but a few coppers, and the work is well within the capabilities of anyone. The only point requiring some care is the screw carrying the sheave on the square head. This should be carefully driven square into the head, and a small, thin washer between the sheave and the square head will prevent the former from scoring the latter when in use.

J. L.N.

Painter's Estate.

Mr. John Henry Bowie, of 10, Park-terrace, Stirling, retired painter and house decorator, left £52,593.

Earliest Egyptian Civilisation.

Mr. John A. Roebling, an American benefactor of the British Museum, has made a gift of over £1,000 to further the excavations now being carried out by Mr. Guy Brunton at Badari, in Upper Egypt, for the Trustees of the Museum. Mr. Brunton has brought back from previous expeditions a large number of objects representing a "Tasian" culture believed to be earlier than any previously discovered in Egypt, and many of these now rest in the Museum.

NEW BUILDINGS IN LONDON

Baron's-court.—FLATS.—A scheme is to be started for the erection of a block of flats on a site in Gledstanes-road, W. The plans have been prepared by Mr. George Stapley, F.S.A., 142, Addison-gardens, W.14.

Bermondsey.—FLATS.—The Borough Council are, subject to sanction, to spend £8,200 on the erection of flats at "The Grange" site, on the Vauban-street improvement scheme site.

Bow-street. — EXTENSIONS. — The Opera Hotel, Covent Garden, is being altered for Messrs. Edward Jacobs and Sons, Ltd., fruiterers. The builders are Messrs. Mullen and Lumsden, Ltd., 41, Eagle-street, Holborn, W.C.1, and the architect is Mr. Robert Sharpe, L.R.I.B.A., 28, Victoria-street, S.W.1.

Camberwell.—SHOPS.—A range of new shops and flats, etc., are to be erected on a site at 39-57, Camberwell New-road, S.E. There will be 18 shops in all. The contract will be carried out by Mr. J. Parsons, 190, Waterloo-road, Lambeth, S.E.1. The architect is Mr. F. A. Powell, 344, Kennington-road, S.E.11.

Camden Town.—OFFICES.—A large block of offices, showrooms, shops, etc., are to be erected on a corner site in Pentonville-road, N.W.1. The contract has been placed with Mr. Albert Monk, Lower Edmonton, N. The steelwork will be erected by Messrs. Redpath, Brown and Co., Ltd., Lawrence Pountney-hill, E.C.4. The plans have been prepared by Messrs. Waite and Waite, 15, Great Castle-street, W.1.

Charterhouse-street.—BUILDING.—At a cost of about £15,000, a new building is to be erected at Smithfield Market, E.C.1. The plans are in the hands of the City Corporation's architect, Mr. Sydney Perks. The Guildhall, Basinghall-street, E.C.

Chiswick.—SHOWROOMS.—A new motor showroom, etc., is to be erected for Messrs. Empire Motors, Ltd., at the rear of their premises, 506, Chiswick High-street, W.4. The contract has been placed with Messrs. Coyle and Co., Ltd., 61, High-street, Brentford. Messrs. Hearn and Chuter, 13, Town Hall-buildings, W.4, are the architects.

Clapton.—REBUILDING.—Plans have been approved for the rebuilding of the "Fountain" public-house, Lower Clapton-road, E., on behalf of Messrs. Watney, Combe, Reid and Co., Ltd., Stag Brewery, Westminster, S.W.1. Messrs. Mullen and Lumsden, Ltd., 41, Eagle-street, Holborn, W.C.1, are the builders.

Dagenham.—HALL.—A site has been acquired for the erection of a new church mission hall. Accommodation will be provided for about 200 persons, with residential quarters for the missioner. The plans are being prepared by Mr. W. Alexander, 64, Wellington-road, Hampton Hill.

Deptford.—DWELLINGS.—For construction of two blocks of dwellings at Hughes Fields estate (Watergate-street area)), Deptford, the L.C.C. are inviting tenders. Mr. G. Topham Forrest, F.R.I.B.A., architect to the Council, has prepared the plans.

Ealing.—HALL.—The Committee of the West Ealing Congregational Church are to carry out alterations and additions, including the erection of a new hall. The contract has been placed with Mr. W. J. Dickins, 19, Broadway, W.5. The steelwork will be carried out by Messrs. Archibald D. Dawnay and Sons, Ltd., Steelworks-road, Battersea, S.W.11. The plans have been prepared by Mr. P. W. Meredith, F.R.I.B.A., 34, Old Queen-street, Westminster, S.W.1.

East Ham.—OFFICES.—The Town Council has received from the Electricity Commission formal sanction to the borrowing of £4,500 in respect of additional accommodation for offices, stores, etc., at the Electricity Department.

East Ham.—SCHOOL.—The Board of Education have provisionally approved the plans of the proposed open-air school on Durban House site, East Ham.

Fulham.—BUILDING.—The application by Mr. A. J. Fuller, Borough Electrical Engineer, for consent to the erection of a static sub-station at the rear of 123, New King's-road, abutting upon Perrymead-street, has been approved by the Fulham Borough Council.

Hackney. — REBUILDING. — The "Cock" public-house, in Mare-street, Hackney, is to be rebuilt by Messrs. Schooley & Son, 5, Market-street, Finsbury, E.C.2. The work is being carried out for Messrs. Truman, Hanbury, Buxton & Co., Ltd., to the plans of Mr. Arthur E. Sewell, architect, 91, Bricklane, E.1. The quantity surveyor is Mr. William Gilbert, of 74, Broad-street-avenue, E.C.2. The scheme is to cost £7,787.

Hammersmith.—ALTERATIONS.—Alterations, etc., are being carried out to the premises of Messrs. Lilley and Skinner, shoe manufacturers, at The Broadway, Hammersmith, W.6. The builders are Messrs. Harry Neal, Ltd., of Northwood, Middlesex.

Hammersmith.—ALTERATIONS.—A scheme of improvements is to be put in hand at the "Hand and Flower" public-house in Hammersmith-road.

Hounslow.—ADDITIONS.—The committee of the Hounslow Congregational Church have under consideration the erection of a new church and Sunday schools, the former to seat about 500 persons and the latter approximately 200. The plans have been prepared by Mr. J. P. Blake, architect, Bank House, High-street, Hounslow.

Isleworth.—SHOPS.—Work has commenced upon the erection of a block of 9 shops with living rooms above on a site in the London-road. The contract has been placed with Mr. W. J. Harris, Grove House, Woodlands-road. Mr. J. P. Blake, Bank House, High-street, is the architect.

Kensington.—ALTERATIONS.—Messrs. Boots Cash Chemists, Ltd., Nottingham, have decided to carry out alterations to their branch shop premises at 199, Kensington High-street, W. The contract has been placed with Messrs. Mullen and Lumsden, Ltd., 41, Eagle-street, Holborn, W.C.1. The works will be supervised by Mr. P. J. Bartlett, A.R.I.B.A., Station-street, Nottingham, architect to the company.

Morden.—HOMES.—The trustees of the Earl Haig Memorial Homes have now approved a contract for the erection of the first portion of the scheme on the site of Mill House for the provision of memorial homes for ex-Service men. The tender of Messrs. Henry Boot and Sons, Ltd., 12, Lower Grosvenor-place, Westminster, S.W.1, has been accepted for the building of 123 homes. The plans are by Mr. G. Grey Wornum, F.R.I.B.A., Blue Ball-yard, St. James's-street, S.W.1.

Paddington.—ADAPTATION.—The Wilberforce Church of England school is to be adapted as a junior mixed and infant school, for the London County Council. The work is to be carried out by Messrs. W. H. Cooper & Son, 201, Hammersmith-road, W.6, at £3,769.

Portland-place.—PREMISES. — The British Broadcasting Corporation announces that the contract has been signed between the syndicate erecting Broadcasting House on behalf of the B.B.C. and Messrs. Ford & Walton, Ltd., builders, of 254, High-road, Kilburn, N.W.6, for the erection of the superstructure. The preliminary work has formed the subject of a contract with Messrs. Holland & Hannen and Cubitts, Ltd. The architect is Lieut.-Col. G. Val Myer, F.R.I.B.A., with whom is associated Mr. M. T. Tudsbery, A.M.I.C.E., the civil engineer to the British Broadcasting Corporation.

Putney.—GYMNASIUM.—The Girls' Public Day School Trust, Ltd., Broadway-court, Westminster, S.W.1, have agreed to the erection of additions to their Putney High School, Putney-hill, S.W.15, including a new gymnasium, etc. The builders are Messrs. W. H. Merrett and Son, Carshalton-road, Sutton.

Regent's Park.—POND.—H.M.O.W. have accepted the tender of Messrs. Mears Bros., of Weardale-road, Lewisham, S.E.13, for the erection of a children's boating pond in Regent's Park, N.W. The plans are by H.M.O.W. Architect's Department.

Richmond.—STATION.—The Southern Railway Company have decided to complete their plans for the construction of the proposed Manor-road station. The cost is estimated at approximately £12,000. The work will be supervised by the company's architectural department at Waterloo Station, S.E.1.

Richmond.—ALTERATIONS.—Alterations and additions to being carried out at the "Black Horse" public-house. The contract is in the hands of Messrs. Speechley and Smith, Ltd., Excelsior-works, Richmond-road. Plans by Messrs. F. J. Fisher and Son, 35, John-street, Bedford-row, W.C.1.

Sanderstead.—BANK.—The Midland Bank, Ltd., Threadneedle-street, E.C.3, have acquired a site in the Station-parade, Sanderstead-road, for the erection of new branch premises with a flat above the banking hall. The plans have been approved, the architect being Mr. G. H. Goldsmith, F.R.I.B.A., 44, Great Russell-street, Bloomsbury, W.C.1.

Sloane-avenue.—GARAGE.—The application of Sir Reginald Blomfield, R.A., to the L.C.C. for the erection of a garage at 24, Sloane-avenue, Chelsea, S.W., has been granted.

Stockwell-green.—ADDITIONS.—Messrs. C. Hammerton and Co., Ltd., brewers, have approved of plans for the extension and alteration of their brewery premises at Stockwell green, S.W.9. The contract has been placed with Messrs. L. and W. Whitehead, Ltd., 169, Clapham-road, S.W.9. The architects are Messrs. W. Bradford and Sons, 12, Regent-street, S.W.1.

Stoke Newington.—BUILDING.—In connection with the Stoke Newington Borough Council's unemployment schemes, sanction has been obtained for the erection of a sub-station at £9,445.

Stoke Newington. — BUILDING. — The Borough Council has approved the plans of the proposed new sub-station in Wordsworth-road, and tenders are being invited.

Surbiton.—The U.D.C. is considering a scheme for the erection of a combined library and fire station. The plans are in the hands of Mr. Joseph Hill, F.R.I.B.A., 34, Gordon-square, W.C.1.

Sutton.—VICARAGE.—The vicar and wardens of St. Phillip's Church Council have approved plans for a new vicarage in Cheam Common-road. The contract has been placed with Mr. W. J. Turpin, 38, Royal Hill, Greenwich, S.E.10. The architect is Mr. J. Rawlinson, A.R.I.B.A., 18, Adam-street, Adelphi, W.C.2.

Sutton.—HALL.—A new public hall is to be erected on a site in Station-road, Belmont, with accommodation for about 150 people. The contract will be carried out by Messrs. A. Bean, Ltd., Station-road, Belmont. The plans have been prepared by Messrs. Eiloart, Son and Inman, 40, Chancery-lane, W.C.2.

Tooley-street.—BUILDING.—With reference to the paragraph which appeared under this heading in our last issue, we are officially informed that the information given is incorrect.

Upper Norwood.—Additions are to be made at All Saints' Day School. The scheme is estimated to cost £1,300.

West Ham.—SCHOOLS.—The West Ham Education Committee have accepted the tender of Mr. F. J. Coxhead, builder and contractor, 45, Bulwer-road, Leytonstone, E., for the erection of the new South Hallsville Senior School for boys and girls, and the adaptation of the existing boys' building for use as an infants' school. Mr. John H. Jacques, F.R.I.B.A., 61, West Ham-lane, Stratford, E.15, is the architect. The tender price is £36,674.

RATES OF WAGES IN THE BUILDING TRADE

[Every endeavour is made to ensure accuracy but we cannot be responsible for errors.]

	Masons.	Bricklayers.	Carpenters Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Labourers.
Aberdare	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Accrington	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Aldershot	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Alfreton	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Alnwick	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Altrincham	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Ashford Kent	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Ashington	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Ashton-under-Lyne	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Aylesbury	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Aylsham	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Banbury	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Barnsley	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Barnstaple	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Barrow-in-Furness	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Barry	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Basingstoke	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Bath	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Bedford	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Berwick	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Bexhill	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Birkenhead	1/9	1/9	1/9	1/10	1/9	1/9	1/9	1/3½
Birmingham	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Bishop Auckland	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Blackburn	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Blackpool	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Bognor Regis	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Bolton	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Bournemouth	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Bradford	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Bradford-on-Avon	1/4	1/4	1/4	1/4	1/4	1/4	1/3	1/0
Braintree	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Brentwood	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Bridgwater	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Bridlington	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Brighton	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Bristol	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Bromsgrove	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Bromyard	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Bungay	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Burnley	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Burton-on-Trent	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Bury	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Buxton	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Cambridge	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Canterbury	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Cardiff	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Carlisle	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Chatham	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Chelmsford	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Cheltenham	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Chester	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Chesterfield	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Chorley	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Cirencester	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/3½	1/0½
Clacton	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Colchester	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Coventry	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Cranbrook	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Crewe	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Cromer	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Darlington	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Deal	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Denbigh	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Derby	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Devizes	1/4	1/4	1/4	1/4	1/4	1/4	1/3	1/0
Dewsbury	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Doncaster	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Dorchester	1/4	1/4	1/4	1/4	1/4	1/4	1/3	1/0
Dorking	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Dovercourt	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Driffield	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Droitwich	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Dudley	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Durham	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Eastbourne	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
E. Glam. (Mon. Val.)	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Ely	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Exeter	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/5½	1/2
Exmouth	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Fakenham	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Felixstowe	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Folkestone	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Frome	1/4	1/4	1/4	1/4	1/4	1/4	1/3	1/0
Glossop	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Gloucester	1/6	1/6	1/6	1/6	1/6	1/6	1/5	1/1½
Godalming	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Goole	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Gosport	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Grantham	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Great Yarmouth	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Grimsby	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Guildford	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Halifax	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Harpenden	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Harrogate	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Hartlepools	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Harwich	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Hastings	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Hatfield	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Hednesford	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Hereford	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/4½	1/1½
Herne Bay	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Hertford	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Hitchin	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Hoddesdon	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Holt	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Huddersfield	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Hull	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Hunstanton	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Huntingdon	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Isle of Wight	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Ipswich	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Keighley	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Kettering	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Kidderminster	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
King's Lynn	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Lancaster	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Leamington Spa	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Leeds	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Leicester	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Leighton-Buzzard	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Lichfield	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Lincoln	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Littlehampton	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Liverpool	1/9	1/9	1/9	1/10	1/9	1/9	1/9	1/3½
Llandudno	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Llanelly	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
London:								
12 m. radius	1/9	1/9	1/9	1/9*	1/9	1/9	1/8	1/4
12-15 m. radius	1/8½	1/8½	1/8½	1/8½*	1/8½	1/8½	1/7½	1/3½
Loughborough	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Lowestoft	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Luton	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Macclesfield	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Maidstone	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Malvern	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Manchester	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Mansfield	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Margate	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Market Harb'rough	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Matlock	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Melton Constable	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Melton Mowbray	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Merthyr Tydfil	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Middlesbrough	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Newark	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Newbury	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Newcastle-on-Tyne	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Newcastle-ur-Lyme	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
New Forest	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Newmarket	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Newport, Mon.	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Northampton	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Norwich	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Nottingham	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Nuneaton	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Oakham	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Oldham	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Oxford	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Paignton	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Peterborough	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Plymouth	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/6½	1/2½
Pontypridd	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Portsmouth	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Preston	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Ramsgate	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Reading	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Redcar	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Redditch	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Reigate	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Retford	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Ripon	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Rochdale	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Rochester	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Rugby	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Saffron Walden	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
St. Albans	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
St. Helens	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Sawbridgeworth	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Saxmundham	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Scarborough	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Sevenoaks	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Sheffield	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Shrewsbury	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Sittingbourne	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Southampton	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Southend-on-Sea	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Southport	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
South Shields	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Stevenage	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Stockport	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Stockton-on-Tees	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Stoke-on-Trent	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Stourbridge	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Stourport	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Stowmarket	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Stratford-on-Avon	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Stroud	1/5	1/5	1/5	1/5	1/5	1/5	1/4½	1/0½
Sunderland	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Swaffham	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Swansea	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Swindon	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/4½	1/1½
Tamworth	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Taunton	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Thetford	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Torquay	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Totnes	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4	1/0½
Trowbridge	1/4	1/4	1/4	1/4	1/4	1/4	1/3	1/0
Tunbridge Wells	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Uttoxeter	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Wakefield	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Walsall	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Wallsend	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Warminster	1/4	1/4	1/4	1/4	1/4	1/4	1/3	1/0
Warrington	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Warwick	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Wells (Norfolk)	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Welwyn Gar. City	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
West Bromwich	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Weston-sup.-Mare	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Weymouth	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/3½	1/0½
Whitby	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Wigan	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Winchester	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Windsor	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Wisbech	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Wolverhampton	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Woodbridge	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Worcester	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Worksop	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Worthing	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Wrexham	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Wroxham	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Wymondham	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
York	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½

* The rate recognised by the National Association of Plasterers, Granolithic and Cement Workers, is 1/11½ per hour.

For Building Trade wages in Scotland, see page 242.

CONTRACTS, COMPETITIONS, &c.

For some contracts still open, but not included in this List see previous issues. Those with an asterisk are advertised in this number. Certain conditions beyond those given in the following information are imposed in some cases, such as that advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed, that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given is the latest date when the tender, or the names of those willing to submit tenders, may be sent in, the name and address at the end is the person from whom or place where quantities, forms of tender, etc., may be obtained.

Following is a list of abbreviations:—Borough Surveyor, B.S.; Borough Engineer, B.E.; District Surveyor, D.S.; Clerk, C.; Town Clerk, T.C.; County Engineer, C.E.; County Surveyor, C.S.; County Architect, C.A.; Surveyor, S.; Engineer, E.; Borough Architect, B.A.; Architect, A.

BUILDING, PAINTING, ELECTRIC LIGHTING, HEATING, etc.

JANUARY 27.

Aylesbury.—Painting.—Of Cattle Market, for T.C. Wm. H. Taylor, B.E. and S.

Bootle.—Houses.—247 houses, new roads, sites 7 and 8, Northfield-rd., for Corporation. E. and S. Dep. £2 2s.

Bradford.—Additions.—Also alterations to Technical College, for E.C. City Architect.

Hardingstone.—Cottages.—Six non-parlour-type cottages; approach road to housing site; and extension of sewer in 6 in. pipes, approx. length 90 yds., for R.D.C. P. D. Scott, building surveyor and sanitary inspector, Derngate-chambers, Northampton. Dep. £2.

Harold Wood, Essex.—Hospital Buildings.—For the C.B. of West Ham. Town Clerk, Town Hall, West Ham, E.15. Dep. £1.

Huddersfield.—Urinal.—Erection of public urinal in Leeds-rd., Huddersfield, for C.B. B.E., 1, Peel st., Huddersfield.

Huddersfield.—Painting.—Exterior woodwork, ironwork, etc., in connection with police station and education offices, for Corporation. Borough Architect, 26, Ramsden-st.

Kidderminster.—Houses.—86 non-parlour type on Greatfield housing estate, for T.C. J. Hawcroft, B.E. and S., 110, Mill-st. Dep. £2 2s.

Kingston-upon-Hull.—Fencing.—Wood fencing along boundaries of Wolfreton-lane and Swine Bank extension, length 3,760 yds.; Loatley's-lane length 6,740 yds.; Endyke-lane, length 5,220 yds.; Hall-rd. extension, length 2,100 yds., for T.C. T. Thomas, City E.

Littlehampton.—Store.—Store and lavatory on site adjacent to swing bridge for U.D.C. S.

Macduff.—Houses.—Two flatted blocks, 4 houses per block, at Barnhill-ter., for T.C. B.S.

Maidstone.—New Offices.—Erection of, for the Corporation. Town Clerk, Town Clerk's Offices, King-st., Maidstone. Dep. £2 2s.

Near York.—Houses.—Poultry houses and runs to accommodate a thousand birds, at Farm Institute, Askham Bryan, near York, for Yorkshire Council for Agricultural Education. Joint Clerks, County Hall, Beverley. Dep. £1.

Romford.—Repairs.—To laundry floor at Institution, for B.G. Harrington & Evans, architects, Western-chambers, South-st.

Sandgate.—Dressing-room.—Also internal and external decorations at Chichester Hall, High-st., for U.D.C. J. A. Woodgate, S. Dep. 2s. 2s.

Wrenbury.—Reconditioning.—Block of Shippon buildings at Wrenbury Hall Tuberculosis Colony, for Cheshire C.C. F. Anstead Browne, F.R.I.B.A., County Architect, Newgate-st., Chester. Dep. £1 1s.

JANUARY 28.

Bradfield.—Alterations.—To Bradfield Poor Law Institution, for B.G. Clerk, Berkshire County Council, Shire Hall, Reading.

Croydon.—Heating.—Rearrangement of steam boilers and heating at the National Aircraft factory, Waddon, Croydon, for H.M.O.W. Contracts Branch. Dep. £1 1s.

Devon.—Houses.—Bratton Clovelly, house for police constable, and Georgeham, Croyde, house for police constable, for C.C. County Architect, 97, Heavitree-rd., Exeter.

Kingston.—Rebuilding.—Certain works in connection with rebuilding three chimney stacks on roof of administrative block at Kingston and District Hospital, Kingston Hill, for B.G. W. Taylor, clerk.

Leeds.—Fencing.—Wrought-iron fencing at Low Moor Side, Holbeck, and Mill Green, for T.C. J. E. Acfield, City E.

Liverpool.—Demolition.—Of old Athenaeum building, Church-st., for T.C. Land Steward and Surveyor.

JANUARY 29.

Belfast.—Demolition.—Of existing buildings and erection of business premises, at corner of Grosvenor-rd. and Durham-st. H. Ganly, architect and civil engineer, 13, Donegall-sq. North.

Clutton.—Electric Light.—At 55 houses, for the R.D.C. J. Mayne-Morgan, 6, Church-rd., Whitchurch, Cardiff.

Cowdenbeath.—Housing Scheme.—Various trades for the erection of 32 houses at Randolph-st., Cowdenbeath, for T.C. C. A. Alexander, B.S., Town House, Cowdenbeath. Dep. £2 2s.

Edinburgh.—School.—Erection of Prestonfield school, for E.C. J. Stewart, Executive Officer.

Liverpool.—Painting.—Interior, etc., at Medical Officer of Health's Department, Crosshall-st., for T.C. Land Steward and Surveyor.

Muinebeag.—Reconstruction.—Of building for Garda Siochana, at Muinebeag, Co. Carlow, for Commissioners of Public Works. T. Cassedy, secretary, Office of Public Works, Dublin. Dep. £1.

Rhiconich.—Rebuilding.—Rebuilding and improving police station at Rhiconich, Eddrachilles, for Sutherland C.C. Horne & Murray, architects, Golspie.

JANUARY 30.

★Becontree.—Plastering.—At the above Clinic, for the Dagenham U.D.C. Clerk of the Council, the Council Offices, Valence House, Chadwell Heath.

Birmingham.—Demolition, etc.—At Colmore Telephone Exchange, for H.M.O.W. Contracts Branch, King Charles-street, S.W.1. Dep. £1 1s.

Burnham.—Repair.—Repair and repainting Parish Council Offices and fire station, for P.C. F. H. Roberts, clerk.

Glasgow.—Painting, etc.—108 houses at Rumford-st., for T.C. D. Stenhouse, T.C.

Manchester.—Shelter.—Dressing shelter to open-air bath at Alexandra-park, for T.C. City Architect. Dep. £1 1s.

JANUARY 31.

Arbroath.—Additions.—Also alterations, Arbroath High school, for Forfarshire E.C. Master of Works, Education Offices, Forfar.

Bristol.—Houses.—304 on Bedminster housing site, for T.C. L. S. McKenzie, City E. and S., 51, Prince-st. Dep. £1.

Didcot.—School.—Erection of, for the Berkshire E.C. W. C. F. Anderson, Education Secretary, Shire Hall, Reading. Dep. £2 2s.

Dublin.—Glazing.—Reglazing work in connection with buildings, property of Corporation, for T.C. City Architect, Exchange-buildings, Lord Edward-st.

Erpingham.—Conveniences.—At Overstrand and East Runton, for R.D.C. A. R. Tuddenham, Sanitary Inspector, St. Peter's-rd., Sherringham. Dep. £1.

Ipswich.—Home.—New nurses' home at Heathfields, Woodbridge-rd., for B.G. J. A. Sherman, architect, 9, Northgate. Dep. £3 3s.

London, S.W.—External and Internal Painting.—For the Commissioners, H.M.O.W. Contracts Branch, King Charles-street, S.W.1. Dep. £1 1s.

Looe.—Garage.—Garage, with 2 flats over same, at West Looe-sq. J. & F. Bassett, West Looe.

March.—Extensions.—To the Grammar School, for the Isle of Ely E.C. E. J. P. Osborne, Director of Education, Education Offices, March. Dep. £2 2s.

FEBRUARY 1.

Armagh.—Installation.—Installation of low-pressure hot water heating system; and electric lighting installation, at Armagh new public elementary school, for County E.C. J. St. J. Phillips, B.E., 16, Donegall-sq. South, Belfast.

Gt. Yarmouth.—Housing Scheme.—50 houses on the North Denes Estate, for C.B. B.E., Town Hall, Gt. Yarmouth. Dep. £2 2s.

Hull.—Shops.—4 shops and houses on Derringham Bank Estate, Willerby New-rd., for T.C. D. Harvey, A.R.I.B.A., City Architect. Dep. £2 2s.

Swindon.—Maternity Hospital.—Erection of, for the Corporation. Town Clerk, Town Hall. Dep. £2 2s.

Wakefield.—Adaptation.—Of premises, 95, Northgate, for County of the West Riding of Yorkshire, West Riding Architect, County Hall, Wakefield.

Welwyn Garden City.—200 houses.—Erection of, for the U.D.C. T. J. Osborn, Clerk, Council Offices. Dep. £2 2s.

FEBRUARY 3.

Belfast.—Wall.—Stone boundary wall and gate piers at property known as "Beechgroove," Holywood-rd., for T.C. City Surveyor, Room 91, Architectural Department, City Hall.

Blackwell.—Houses.—And construction of roads and sewers, Upper Langwith, for R.D.C. H. Tatham Sudbury, F.R.I.B.A., chartered architect, Rutland-chambers, Ilkeston. Dep. £2 2s.

Brentford and Chiswick.—Additions.—Also alterations to public library, Duke-av., Chiswick, for U.D.C. E. Willis, E. and S. Dep. £2 2s.

Bristol.—Convenience.—At St. Matthias-park, for T.C. L. S. McKenzie, City E. and S., 63, Queen-sq. Dep. £2 2s.

Broadstairs and St. Peter's.—Improvements.—For (a) Cliff protection works near Grand Hotel, opposite end of Westcliff-rd., Broadstairs; (b) pavilion, etc., at St. Peter's recreation ground; (c) enlargement pavilion at Memorial recreation ground; (d) children's shelter, St. Peter's recreation ground; (e) taking down and re-erecting flint boundary wall in Reading-st., opposite infants' school; for U.D.C. H. Hurd, S.

East Preston.—Cottages.—Two pairs of cottages at Poling, and block of four cottages at East Preston, for R.D.C. H. R. Judd, S., Broadway, Littlehampton.

Gravesend.—Houses.—Erection of 32 parlour type houses on King's Farm Estate, for the Corporation. Town Clerk, 4, Woodville Terrace. Dep £2 2s.

King's Lynn.—Building.—Classrooms and other improvements to Highgate Council school, for E.C. Allflatt & Courtney, architects, Tuesday Market-pl. Dep. £2 2s.

London.—Dwellings.—Two blocks of dwellings at Hughes Fields estate (Watergate-st. area), Deptford and Greenwich, for L.C.C. Architect to Council. Dep. £2.

Newcastle-upon-Tyne.—Schools.—Large Central schools (1,000 scholars) on site having frontage to Middle-st., Walker, for E.C. Thos. Walling, Director of Education, Northumberland-rd. Dep. £5.

Sutton and Cheam.—Lavatories.—At The Green, High-st., Sutton, for U.D.C. W. Hedley Grieves, S. Dep. £2 2s.

Swadlincote.—Houses.—Erection of, for the U.D.C. Clerk to the Council, Council Offices. Dep. £2 2s.

FEBRUARY 4.

★Grays Thurrock.—Houses.—Erection of, on the Grays Hall Estate, for the U.D.C. Clerks of the Council, Council Offices, High Street, Grays. Dep. £2 2s.

Rowley Regis.—Maternity and Child Welfare Establishment.—Erection of, for the U.D.C. D. Wright, Clerk to the Council.

Tullamore.—Houses.—9, at Tullamore, Offaly, for U.D.C. McNamara & Sons, architects, 5, Dawson-st., Dublin.

FEBRUARY 5.

Falmouth.—Bungalow.—Near Pennance-rd., Falmouth. A. J. Cornelius, F.R.I.B.A., architect, Truro.

★Hailsham.—Alterations and Extensions.—To the Post Office, for H.M.O.W. Contracts Branch, King Charles-street, S.W.1. Dep. £1 1s.

Liverpool.—46 houses on Norris Green estate, and 199 on Ashfield estate, Prescot-rd., for T.C. Walter Moon, T.C. Dep. £1 1s.

Southampton.—Houses.—Erection of 328 houses on the Rownhams-road housing site, for the Corporation. Town Clerk's Office, Municipal Offices. Dep. £4 4s.

FEBRUARY 6.

Manchester.—School.—Barlow Hall Municipal School, Chorlton-cum-Hardy, for E.C. P. B. Warbreck Howell, T.C. Dep. £2 2s.

Purley.—Telephone Exchange.—Erection of, for H.M.O.W. Contracts Branch, King Charles-street, S.W.1. Dep. £1 1s.

Salisbury.—New Senior School.—The Clerk of the County Council, The Castle, Winchester. Dep. £1 1s. (payable to the Hampshire C.C.).

FEBRUARY 7.

Campbeltown.—Houses.—Four blocks of houses, each containing four houses of three apartments, and four blocks of houses each containing four houses of two apartments, at Castleacres, for T.C. Thompson & Son, architects, 7, Victoria-place, Airdrie.

Inverness.—Installation.—Rewiring electrical installation of buildings of Inverness District Asylum, for District Board of Control. C. A. Grant, consulting engineer, Electricity Offices, Waterloo-place. Dep. £2.

FEBRUARY 8.

Clonskeagh.—Painting.—At Isolation Hospital, for Rathmines and Pembroke Joint Hospital Board. Surveyor, Town Hall, Rathmines.

Wrexham.—Houses.—57, on Huntroyde estate, for T.C. J. England, Borough Engineer, Architect, 1, Grosvenor-rd. Dep. £3 3s.

FEBRUARY 10.

Cheriton.—Wall.—Reinforced concrete, approx. 200 yds. length of forecourt retaining wall, with approach steps and enclosure walls, fencings, and all appurtenant works, for U.D.C. A. S. Lilley, E. and S. Dep. £1 1s.

★Farnborough.—Mortuary.—Erection of, for the Guardians, Bromley Union, at their Hospital at Locksbottom. Clerk to the Guardians, Union Offices, Bromley, Kent. Dep. £3.

★Litt'ehampton.—Public Conveniences.—Erection of, for the U.D.C. Clerk to the Council, Town Offices. Dep. £2 2s.

London.—Building.—New dust shoots on site adjoining Chancellor's wharf, for Hammersmith B.C. R. Hampton Clucas, B.E. and S.

FEBRUARY 11.

Essex.—Centre.—Cookery and manual instruction centre at Stanford-le-Hope Council school, for C.C. Jno. Stuart, F.R.I.B.A., County Architect. Dep. £1 1s.

Gosforth.—Houses.—16 three-roomed, Coxlodge-rd., for U.D.C. G. Nelson, E. and S.

Richmond (Surrey).—House.—Boiler house and other works in Terrace-gardens, for T.C. B.E. Dep. 10s. 6d.

FEBRUARY 12.

★Diss.—Alterations and Extensions.—To the Post Office, for H.M.O.W. Contracts Branch, King Charles-st., London, S.W.1. Dep. £1 1s.

FEBRUARY 13.

Leyton.—Demolition.—Demolition 629 and 631, High-rd., Leyton, and rebuilding party wall between 627 and 629, as external wall, for T.C. A. P. Howell, B.E. Dep. £10.

★Streetly, Birmingham.—Telephone Exchange.—Erection of, for H.M.O.W. Contracts Branch, King Charles-st., London, S.W.1. Dep. £1 1s.

FEBRUARY 14.

★Brixham.—Post Office.—Erection of, for H.M.O.W. Contracts Branch, King Charles-st., London, S.W.1. Dep. £1 1s.

Cardiff.—Garage.—Foundations of bus garage at Sloper-rd., for T.C. Geo. H. Whitaker, City E. Dep. £3 3s.

Fleetwood.—School.—Senior school, for Lancashire E.C. Stephen Wilkinson, F.R.I.B.A., County Architect, 15, Ribblesdale-place, Preston. Dep. £2.

FEBRUARY 15.

Inverness.—Demolition.—Dismantling of composite school buildings of timber framing and corrugated iron, comprising two classrooms, head and assistant teacher's houses, at School Buildings, Island of Vaternay, for County E.C. D. J. Tolmie, clerk, High-st., Inverness.

FEBRUARY 21.

***Richmond, Surrey.**—Cottages.—Erection of 42 parlour and 82 non-parlour type, for the Town Council. Town Clerk, Town Hall. Dep. £5 5s.

FEBRUARY 22.

Erpingham.—Cottages.—2, at Aylmerton; 6, Briston; 2, Edgefield; 2, Felbrigg; 2, Mundesley; 2, Roughton; 4, East Runton; for R.D.C. Buckingham & Berry, A.R.I.B.A., 43a, Prince of Wales-rd., Norwich. Dep. £1 1s.

FEBRUARY 24.

Harrogate.—School.—Erection of Harrogate new secondary school, for West Riding E.C. Education Officer, County Hall, Wakefield.

NO DATE.

Dewsbury.—Houses.—2, in Birkdale-rd. Holtom & Fox, architects, Union-st.

Ealing.—Wall.—New wall piers and gates on the north and west boundaries of new burial ground, at Pope's-lane, Ealing, W.5, for Ealing and Old Brentford Burial Board. F. Hall-Jones, F.R.I.B.A., 11, Haven Green, Ealing, W.5. Dep. £2 2s.

Gellygaer.—Premises.—Licensed premises at Penybryn, Gellygaer, for Andrew Buchan's Breweries, Ltd. Geo. Kenshole, M.S.A., architect and surveyor, 122, Queen-st., Cardiff. Dep. £5 5s.

Halifax.—Painting.—Painters' and decorators' work in maintenance of King Cross Wesleyan Sunday schools. Rev. G. Bramwell Evens, The Manse, King Cross.

Milnrow.—Houses.—62, drainage, paths, etc., on Holt estate, for U.D.C. A. Travis, architect, Union Bank-chambers, King-st., Rochdale. Dep £2 2s

Preston.—Church.—Erection of Church of St. Teresa, in Church-av. B. Mercer, architect, 11, Chapel-st. Dep. £1 1s.

Salisbury.—Ward.—Adjoining outpatients' department in Crane Bridge-rd., for Governors of the Salisbury Infirmary. J. S. Harding, architect, 65, New-st.

Thirsk.—Repairs.—Repairs stonework and leaded lights, Gothic window, at Church. Vicar, Thirkleby, Thirsk

Torquay.—Alterations and Additions.—To Livermead House Hotel, for Messrs. Livermead House Hotel, Ltd. Francis C. R. Johnson, architect, Barn Studio, Brixham. Dep. £2 2s

MATERIALS, etc.

JANUARY 27.

Finchley.—Road Materials.—For U.D.C. Percival T. Harrison, M.Inst.C.E., 9, The Hawthorns, Regent's Park-rd., Finchley, N.3.

Ongar.—Granite, etc.—For R.D.C. H. C. Phillips, S.

Sunderland.—Highway Materials.—For C.B. B.E.

JANUARY 28.

Southall-Norwood.—Road Materials.—For U.D.C. J. B. Thomson, E. and S.

Willesden.—Building Materials, etc.—For U.D.C. F. Wilkinson, E. and S.

JANUARY 29.

Bradford.—Road Materials.—For T.C. F. Marsden, City E. and S.

Welwyn Garden City.—Road Materials.—For U.D.C. Capt. W. R. James, S.

Worsley.—Road Materials.—For U.D.C. J. Howard, S.

JANUARY 30.

Stratford-upon-Avon.—Road Materials.—For T.C. F. W. Jones, B.E.

Tring.—Road Materials.—For U.D.C. H. N. Hedges, S.

JANUARY 31.

Canterbury.—Road Materials.—For T.C. H. M. Enderby, M.Inst.M. & Cy.E., C.E. and S.

Carshalton.—Broken Granite.—For U.D.C. S. Davey, E. and S.

Croydon.—Highway Materials.—For C.B. B.E.

Grimsby.—Highway Materials.—For C.B. H. G. Whyatt, B.E., 170, Victoria-st.

Norfolk.—Road Materials.—For C.C. S. H. Warren, C.S., Norwich.

Winchester.—Road Materials.—For T.C. City E.

FEBRUARY 1.

Folkestone.—Cement, etc.—For T.C. A. E. Nichols, B.E.

Gillingham.—Road Materials.—For T.C. J. L. Redfern, B.E. & S.

Newmarket.—Granite, etc.—For U.D.C. W. H. Fley, E. and S.

FEBRUARY 3.

Bridgwater.—Road Materials.—For T.C. R. A. Watson, B.E. and S.

Cairo.—Asphalt.—Egyptian Ministry of Public Works, 6,000 metric tons of asphalt for Tanzim Department, Cairo. Department of Overseas Trade: 35, Old Queen-st., S.W.1. (Ref. B.X. 8923.)

Chatham.—Road Materials.—For T.C. R. L. Honey, B.E. and S.

Ilford.—Highway Materials.—For T.C. L. E. J. Reynolds, B.E. and S.

Manchester.—Iron Castings.—For T.C. J. Irvine, manager, Drainage Branch, Public Health Department, Phoenix-buildings, 20, Cooper-st.

Norwich.—Road Materials.—For T.C. J. S. Bullough, City E.

Wangford.—Granite, etc.—For R.D.C. S. Titman, S., Council Cottages, Worlingham.

West Suffolk.—Road Materials.—For C.C. E. H. Bond, C.S.

FEBRUARY 4.

Chesham.—Highway Materials.—For U.D.C. J. E. Sharpe, E. and S.

Leeds.—Road Materials.—For T.C. E. W. Cockerlyne, Highways Engineer, 156, Kirkstall-rd.

FEBRUARY 5.

Beetle.—Road Materials.—For C.B. B.E.

Clacton-on-Sea.—Highway Materials.—For U.D.C. W. Alston, S.

London.—Building Materials.—For Southwark B.C. D. T. Griffiths, T.C.

FEBRUARY 8.

Lexden and Winstree.—Road Materials.—For R.D.C. W. H. Filer, S.

Little Hulton.—Broken Granite.—For U.D.C. J. H. Heyes, clerk.

FEBRUARY 10.

Hertfordshire.—Tar, etc.—For C.C. Lt.-Col. A. E. Prescott, C.S.

London.—Road Materials.—For St. Marylebone B.C. R. C. Graves, T.C.

London.—Highway Materials.—For Finsbury B.C. B.E.

Surbiton.—Highway Materials.—For U.D.C. H. T. Mather, S.

Tottenham.—Road Materials.—For U.D.C. E. Townson, clerk.

FEBRUARY 11.

East Grinstead.—Road Materials.—For U.D.C. E. and S.

FEBRUARY 12.

London.—Paving Materials, etc.—For Deptford B.C. A. Purkis, T.C.

Middlesex.—Road Materials.—For C.C. A. Dryland, C.E., Middlesex Guildhall, Westminster, S.W.1.

Middlesex.—Bitumen Emulsions.—For C.C. A. Dryland, C.E., Middlesex Guildhall, Westminster, S.W.1.

FEBRUARY 13.

***London.**—Materials.—For Lambeth B.C. Town Clerk, Lambeth Town Hall, Brixton Hill, S.W.2.

FEBRUARY 14.

Salisbury.—Building Materials.—For T.C. City E.

FEBRUARY 15.

Felixstowe.—Highway Materials.—For U.D.C. H. Clegg, S.

Ruislip-Northwood.—Highway Materials.—For U.D.C. H. R. Metcalfe, E. and S.

FEBRUARY 17.

Nottingham.—Highway Materials.—For T.C. T. Wallis Gordon, City E. and S.

Victoria.—Bricks.—Refractory bricks and fire-clay, for Yallourn power station, for State Electricity Commission of Victoria. Department of Overseas Trade, 35, Old Queen-st., S.W.1. (Ref. B.X. 5960.)

FEBRUARY 18.

Leeds.—Lime.—For T.C. E. H. Howatson, Sewerage Engineer, 8, Park-sq.

FEBRUARY 19.

Maldens and Coombe.—Road Materials, etc.—For U.D.C. B.S.

FEBRUARY 22.

Long Eaton.—Road Materials.—For U.D.C. H. Raven, S.

FEBRUARY 25.

Brierfield.—Road Materials.—For U.D.C. W. D. Haigh, E. and S.

ENGINEERING, IRON AND STEEL

JANUARY 27.

Benfleet.—Sewerage.—Sewerage works for construction of about 4 miles of stoneware pipe sewers, with manholes, and works incidental, at Hadleigh, for U.D.C. W. E. Blizard, 9, Victoria-st., Westminster. Dep. £3 3s.

Edinburgh.—Filters.—Constructing two filter beds at Fairmile-head, for T.C. J. & A. Leslie & Reid, C.E., 29, Waterloo-place. Dep. £5.

Hazel Grove and Bramhall.—Sewage.—500 yds. of 24-in. stoneware outfall sewer, about 210 yds. in tunnel, with manholes and storm overflow; also detritus and screen chambers, storm water and settling tanks, percolating filters, humus tanks, effluent outfall, sludge drying beds with carriers and pipe connections, approach-rd., fencing and manager's house, with water supply therefor, at Offerton, for U.D.C. G. B. Kershaw, chartered civil engineer, 9, Victoria-st., Westminster, S.W.1. Dep. £5.

JANUARY 28.

Barton-upon-Irwell.—Reconstruction.—Of Rake-lane bridge, Clifton, for R.D.C. C. Faulkner, Clerk, Green-lane, Patricroft. Dep. £2.

Coatbridge.—Sewage.—Sewage purification works on Luggie Glen site to south of Coatbridge-Glasgow main road, and few hundred yards west of Woodside-st., for T.C. W. C. Easton, chartered civil engineer, 183, West George-st., Glasgow, C.2. Dep. £10 10s.

Padiham.—Bridge.—Steel footbridge across River Calder, for U.D.C. S.

JANUARY 29.

Edinburgh.—Widening.—Milton-rd. bridge, for T.C. B.E.

JANUARY 31.

Johannesburg.—Bridgework.—Structural bridgework, for South African Railways and Harbours. Department of Overseas Trade, 35, Old Queen-st., S.W.1. (Ref. A.X. 8888.)

Johannesburg.—Steelwork.—Structural steelwork, etc., for points and crossings shop, for South African Railways and Harbours. Department of Overseas Trade, 35, Old Queen-st., S.W.1. (Ref. A.X. 8887.)

Stratford-upon-Avon.—Bridge.—Bridge, partly in reinforced concrete and partly in brickwork, over River Avon, for T.C. F. W. Jones, B.E. Dep. £3 3s.

FEBRUARY 3.

Bristol.—Shed.—Steel-built and corrugated-sheeted sack shed, with necessary concrete foundations and other general work, on site of old Royal Edward warehouse, Royal Edward Dock, Avonmouth, for Port Authority. T. A. Peace, Chief Engineer, Chief Engineer's Office, Avonmouth. Dep. £3.

Girvan.—Sewer.—Silt chambers, with relative works; and cast-iron sewer, for T.C. B.S. Dep. £1.

FEBRUARY 5.

Lancashire.—Reconstruction.—Also widening of Lollies Canal bridge on Scariabrick-Downholland and Maghull-rd., for C.C. County Surveyor and Bridgemaster, County Offices, Preston.

FEBRUARY 10.

Caterham and Warlingham.—Drainage.—6,400 yds. of concrete and cast-iron sewers, 18 in. dia., together with all manholes, ventilating shafts and other appurtenant works, for U.D.C. John Taylor & Sons, engineers, Caxton House, Westminster, S.W.1. Dep. £5.

FEBRUARY 12.

West Riding.—Water Supply.—Connecting up of five agricultural holdings at Ouseflect, near Goole, with public water supply, for C.C. West Riding County Land Agent, County Hall, Wakefield.

FEBRUARY 15.

Neyland.—Stage.—Floating landing stage, bridge leading thereto, and alterations to existing timber jetty, for Pembrokeshire C.C. Wilson & Bell, chartered civil engineers, 57-59, Victoria-st., S.W.1. Dep. £2.

FEBRUARY 20.

Bann.—Drainage.—Extensive deepening and widening, through rock and other materials, of Lower Bann River over its whole course of approximately 30 miles between Lough Neagh and tidal portion of river near Coleraine, Co. Londonderry; and for concrete construction works in connection with installation of three sets of flood gates, together with auxiliary works for navigation and fisheries, for Government of Northern Ireland. Secretary, Ministry of Finance, 15, Donegall-sq. West, Belfast. Dep. £50.

Morley.—Tanks.—Two reinforced concrete humus tanks at Sewage Disposal Works, Dewsbury-rd., Churwell, for T.C. F. Turner, B.E. Dep. £2 2s.

FEBRUARY 27.

Johannesburg.—Structural Steelwork.—For South African Railways and Harbours. Department of Overseas Trade, 35, Old Queen-st., S.W.1. (Ref. A.X. 8972.)

MARCH 1.

Cairo.—Bridge.—Over River Nile at Kasr-el-Nil, for Main Roads and Bridges Department. Department of Overseas Trade, 35, Old Queen-st., S.W.1. (Ref. A.X. 8704.)

MARCH 3.

Australia.—Pipes.—Pipes, valves and receivers, with accessories for high-pressure services at Yallourn Power Station extensions, for State Electricity Commission. Agent-General for Victoria, Victoria House, The Strand, London. Charge £2 2s

Watford.—Sewerage.—Construction of tanks and percolating filters at the Sewage Disposal Works, and alterations to a pumping station at Abbots Langley, for R.D.C. A. P. I. Cotterell & Son, engineers, 54, Victoria-st., Westminster, or E. H. L. Lailey, S., 9, Market-st., Watford. Dep. £5 5s.

Zagazig, Egypt.—Bridge.—Swing bridge over Canal El Wadi, for the Ministry of Communications, Main Roads and Bridges Department. Department of Overseas Trade, 35, Old Queen-st., S.W.1. (Reference No. A.X. 8978.)

MARCH 4.

Wellington, N.Z.—Structural Steel.—Structural steel, galvanised screens and ladder rungs, for Public Works Department, New Zealand. Department of Overseas Trade, 35, Old Queen-st., London, S.W.1. (Ref. A.X. 8785.)

ROAD, SEWERAGE, AND WATER WORKS

JANUARY 27.

Beckenham.—Surfacing.—Of The Drive, Church-av., The Crescent, St. George's-rd., and Whitmore-rd., for U.D.C. H. Storr Best, S., 36, High-st. Dep. £2.

Beddington and Wallington.—Improvements.—To Salcott-rd., Morton-gardens, The Manor-way, for U.D.C. S. F. R. Carter, S. Dep. £1 1s. each.

Cumberland.—Tarring.—Surface tarring of part or whole of approx. 500,000 sq. yds. of main roads with refined tar, for C.C. G. O. Lockwood, C.S.

Glasgow.—Road.—Road and sewer at Balornock No. 2 extension, for T.C. D. Stenhouse, T.C.

Kingston-upon-Hull.—Sewers.—Reinforced concrete of street and sewer works as follows: Wolfreton-lane, length 720 yds.; Swine Bank extension, length 900 yds.; Loatley's-lane, length 3,320 yds.; Endike-lane, length 3,050 yds.; Hall-rd. extension, length 250 yds., for T.C. T. Thomas, City E.

Maldens and Coombe.—Sewers.—Laying Greentune soil sewer, for U.D.C. H. Jeffes, A.M.I.C.E., E. and S., Council Offices, New Malden, Surrey. Dep. £2 2s.

JANUARY 28.

Barking Town. — Reconstruction. — Dismantling existing light railway track, reconstruction thereof, including laying of about 230 tons of rail and resurfacing of carriageway with granite setts and wood blocks on new concrete foundation in East-st., Long bridge-rd., and Fanshawe-av., for U.D.C. R. A. Lay, E. and S.

Barnet.—Making-up.—Bedford-av. (section 3); Ellesmere-grove; for U.D.C. S.

Ilford.—Making-up.—Of Wards-rd. West, Gearies-ville-gardens, Brandville-gardens, Georgeville-gardens, Haigville-gardens, for T.C. B.E. and S. Dep. £2 2s.

Kilmarnock.—Piping.—Laying 600 lin. yds. water piping and specials; supply and laying of 670 lin. yds. of fireclay sewers and manholes, etc.; and excavation, supplying and laying of 1,800 sq. yds. of bottoming; and other necessary works in connection with roads at Annanhill housing scheme, for T.C. W. Dunbar, B.S.

Merioneth.—Road Works.—On Bryncastell and Cildydd road diversions, route A.487 (Dolgelley-Machynlleth-rd.), for C.C. H. E. Lavies, C.S., County Offices, Dolgelley, Merioneth. Dep. £5.

Newport (Mon).—Reconstruction.—Also widening of Chepstow-rd. (part) from Hawthorne-av. to borough boundary, for C.B. B.E. Dep. £2 2s.

Sleaford.—Roads.—Construction of new roads and paths, sewers, etc., to Grantham-rd. housing scheme, for U.D.C. S. F. Clare, S., Jermyn-st.

Urmston.—Road.—Reforming foundations, forming channels, and resurfacing with tarmacadam in 18 streets, for U.D.C. J. Heath, S.

JANUARY 29.

Friern Barnet.—Making-up.—Of The Ridgway, Rethune-av., Crescent-rd., for U.D.C. J. Montague Gameson, E. and S. Dep. £2 2s

Ivybridge.—Extension.—Of 4 in. water main, from Woodland-lane corner to Woodland Village, for U.D.C. W. H. Full, A.R.S.I., surveyor.

Merton and Morden—Making-up—Arras-av., Morden, for U.D.C. G. Jerram, E. and S. Dep. £1.

Merton and Morden. — Drainage. — Widening Cannon-hill-lane for length of about 330 yds., including construction new footpath, surface water drainage, etc., surfacing with asphalt or bituminous material in Dorset-rd., for U.D.C. C. J. Mountifield, clerk. Dep. £1.

JANUARY 31.

Crompton.—Reconstruction.—Of Brunswick-st., Furrow-st. (part of), Refuge-st., Edmund-st., and Greenfield-lane, for U.D.C. F. T. Jones, E. and S.

Portslade-by-Sea.—Making-up.—Of Lincoln-rd., for U.D.C. D. V. Howard, S.

Sale.—Making-up.—Of Alexandra-rd., for U.D.C. E. Bleakley, E. and S. **Dep. £2 2s.**

FEBRUARY 1.

Barnstaple.—Widening.—Of Sticklepath-hill, for T.C. E. Y. Saunders, B.S. Dep. £3 3s.

FEBRUARY 3.

Birmingham.—Paving.—Repair and reinstatement of asphalt and bituminous carriageways, for T.C. H. H. Humphries, City E. and S. Dep. £1.

Brentford and Chiswick.—Making-up.—Of Staveley-rd. (western portion), Chiswick, for U.D.C. E. Willis, E. and S.

Chatham.—Sewerage.—Connecting sewer, with incidental works to main outfall sewer of Rochester and Chatham Joint Sewerage Board at Watling-st., for T.C. W. H. Radford & Son, civil engineers, Albion-chambers, King-st., Nottingham. Dep. £2 2s.

Manchester.—Drainage.—For T.C. J. Irvine, manager of the Drainage Branch, Public Health Department, Phoenix-buildings, 20, Cooper-st. Dep £1 1s.

Renfrew (First or Upper District).—Roads.—Supplying with metal sections of roads, also for borders, setts, and chips, for C.C. A. Lindsay, Road Surveyor, Surveyor's Office, Hurlet, Nitshill.

Southampton.—Making-up.—Cherry-walk; Mulberry-walk; Torquay-av.; Bramston-rd.; and Cedar-av., for C.B. B.E., 33, French-st. Dep. 10s. 6d. each.

Whitstable.—Making-up.—Of Manor-rd., part of, and Gordon-rd., part of, for U.D.C. C. Dunkin, Surveyor and Water Engineer. Dep. £1 1s.

FEBRUARY 4.

Coalville.—Water Supply.—For U.D.C. Pick, Everard, Keay & Gimson, engineers, 6, Millstone-lane, Leicester. Dep. £1 1s.

Gellygaer.—Road.—Improvement of Brithdir-rd., Brithdir, including excavation, walling, drainage, curbing, and surfacing with asphalt, bituminous or tarmacadam, for U.D.C. F. Read, S.

Merioneth.—Surface.—Road surface tarring, for C.C. H. E. Davies, C.S.

FEBRUARY 5.

Caterham and Warlingham.—Sewer.—Extension of existing 7-in. stoneware soil sewer in highways, for U.D.C. H. R. Martin, E and S. Dep. £1 1s.

Denbighshire.—Road.—Widening and diversion of Colwyn Bay—Bettws-y-Coed main road, section No. 1 between Ty Gwyn Farm, for C.C. E. A. Evans, C.S., 46, Clwyd-st., Ruthin. Dep. £3.

FEBRUARY 6.

Coulsdon and Purley.—Making-up.—Of Downlands-rd., Purley; Groveland-rd., Purley; and Warwick-rd. (part of), Coulsdon, for U.D.C. G. A. Ballard, S. Dep. £1 each road.

FEBRUARY 8.

Leicestershire.—Road.—Construction of a by-pass road on the Leicester-Market Harborough main road, in the Urban District of Oadby, for C.C. S., Grey Friars, Leicester. Dep. £2 2s.

FEBRUARY 10.

Harpenden. — Making-up. — Overstone-rd., for U.D.C. W. H. Johnson, S. Dep. £2.

Harpenden.—Making-up.—Kerbing, channelling and making-up Hyde View-rd., and part of Westfield-rd., for U.D.C. W. H. Johnson, S. Dep. £2.

Hertfordshire. — Tarring. — Surface spraying approx. 4,000,000 sq. yds. of main roads with refined tar and bituminous compounds, for C.C. Lt.-Col A. E. Prescott, County Surveyor.

Londenderry.—Pipes.—Provision and laying of a double line of 12-in. steel pipes, with cast steel ball and socket joints, in trench under bed of River Foyle, for T.C. W. Criswell, engineer, Guildhall. Dep. £5 5s.

FEBRUARY 11.

Crewe.—Making-up.—Road around east side of Queen's-park, Park-drive, part of, from Alton-st. to Victoria-av.; Priscilla-st., from Martin-st. to Earle-st.; Martin-st., par of; between Ramsbottom-st. and West Ward playground; between Peel and Ramsbottom-sts.; west side of Peel-st.; for T.C. L. Reeves, B.E. and S. Dep. £2 2s.

FEBRUARY 15.

Caterham and Warlingham.—Reconstruction.—Also surfacing of Whyteleafe-rd. and Whyteleafe-hill, Caterham, for U.D.C. H. R. Martin, E. and S Dep. £3 3s.

Glasgow.—Road.—New road from Glasgow to Edinburgh, section C-D (Central); Dewshill to Harthill, for T.C. D. A. Donald, engineer, 271, Alexandra-parade, Glasgow, E.1. Dep. £3 3s.

MARCH 11.

Bushey.—Alterations.—Also extension of King George recreation ground, for U.D.C. E. E. Ryder, S. Dep. £2 2s

Public Appointments

JANUARY 27.

Grimsby.—Clerk of Works required by the Education Committee. Secretary, Education Offices.

London.—Temporary Architectural Assistant. Town Clerk, Finsbury Town Hall, Rosebery-avenue, E.C.1.

***Sheffield.**—(a) General Assistant; (b) Education Assistant; required in the City Architect's Department. City Architect, Town Hall.

JANUARY 28.

***Gateshead.**—Chief Architectural Assistant required in B.E. Department. F. H. Patterson, Borough Engineer, Municipal-buildings.

JANUARY 29.

Twickenham.—Architectural Assistant required by the Corporation. Borough Engineer and Surveyor, Municipal Offices.

JANUARY 30.

***Leicester.**—Architectural Assistant required by the Corporation. City Engineer and Surveyor, Town Hall

Leicester.—Clerk of Works required by the Corporation. City Engineer and Surveyor, Town Hall.

London.—Principal required at the Central School of Arts and Crafts, Southampton-row, W.C.1, by the L.C.C. Education Officer (T.1), The County Hall, Westminster-bridge, S.E.1 (stamped addressed foolscap envelope necessary).

Norwich.—Estates Surveyor required in C.E. Office. City Engineer, Guildhall.

Nottingham.—Housing Architect required by the City Council. Town Clerk, Guildhall, Nottingham.

FEBRUARY 1.

***Leicester.**—Architectural Assistant required by the E.C. Director of Education, Town Hall, Leicester.

FEBRUARY 3.

Newmarket.—Junior Assistant required by the U.D.C. Clerk to the Council, Deva Chambers, Newmarket.

FEBRUARY 7.

Gloucester.—Engineer (Temporary). E. T. Gardom, Clerk of the County Council, Shire Hall, Gloucester.

***Newcastle-upon-Tyne.**—Architectural Assistant required by the Education Committee. Director of Education, Education Offices.

***Northampton.**—Technical Assistant required by the C.C. Secretary for Education, County Education Offices.

FEBRUARY 8.

***Nottingham.**—Three Architectural Assistants required in the County Architect's Department. L. Maggs, F.R.I.B.A., F.S.I., County Architect, Shire Hall.

FEBRUARY 10.

***London.**—General Building Foreman required by the Shoreditch Borough Council. Town Clerk, Town Hall, Old-st., E.C.1.

MARCH 6.

London.—Assistant Examiners: (Forthcoming Examination) in the Patent Office (20-25, with extension in certain cases). The Secretary, Civil Service Commission, Burlington-gardens, London W.1.

NO DATE.

***Chiswick, W.4.**—Clerk of Works required by Brentford and Chiswick U.D.C., to supervise erection of a new Central School. Clerk of the Council, Town Hall.

PROPOSED NEW BUILDINGS AND OTHER WORKS*

In these lists care is taken to ensure the accuracy of the information given, but it may occasionally happen that, owing to building owners taking the responsibility of commencing work before plans are finally approved by the local authorities, "proposed" works at the time of publication have been actually commenced. Abbreviations: T.C. for Town Council; U.D.C. for Urban District Council; R.D.C. for Rural District Council; E.C. for Education Committee; B.G. for Board of Guardians; B.C. for Borough Council; P.C. for Parish Council; M.H. for Ministry of Health; M.T. for Ministry of Transport; C.B. for County Borough; B. of E. for Board of Education; M.A.B. for Metropolitan Asylums Board; and M.W.B. for Metropolitan Water Board; Borough Surveyor, B.S.; Borough Engineer, B.E.; District Surveyor, D.S.; Clerk, C.; Town Clerk, T.C.; County Engineer, C.E.; County Surveyor, C.S.; County Architect, C.A.; Surveyor, S.; Engineer, E.; Borough Architect, B.A.; Architect, A.

Altrincham.—T. H. Hill, A.R.I.B.A., 19, Kingsway, architect for theatre in Barrington-rd., for Altrincham Garrick Society. Cost between £5,000 and £6,000.

Arnold.—U.D.C. proposing extensions to baths, at £1,151. Plans prepared.

Ashton-under-Lyne.—The E.C. to select site for administrative buildings for Electricity Department.—T.C. propose 16 houses off King's-rd., and negotiations proceeding for another site, which will accommodate about 200 houses. Plans by B.S.

Aylesbury.—T.C. instructed B.E. and S., to prepare sketch plans for public convenience in Kingsbury-sq.—Council to proceed with suitable offices, showrooms and stores. Cecil M. Quilter, of John S. Quilter & Son, 3, St. James's-st., London, architect.

Barnet.—Herts E.C. propose £6,000 reconstruction of Barnet C. of E. school at Wood-st.

Barnsley.—B.E. to renovate houses at Wilthorpe and Lundwood.—Housing Sub-Committee instructed to consider question of additional housing sites.—Hospitals Committee received sanction of M.H. to £2,365, for "Arnot" block at Kendray Hospital.

Bedlington.—Small senior school for Catholic children and larger one under the local authority, are proposed. Plans for former have been passed.

Benfleet.—12 houses are proposed in S. Benfleet by U.D.C.

Birkenhead.—Scheme under consideration for swimming baths on site in Old Chester-rd., at £45,000. B.E. and S.

Blything.—R.D.C. agreed to erect 8 additional houses at Kelsale.

Bootle.—A. Ellis, 24b, The Temple, Dale-st., Liverpool, architect for junior school in Wadham-rd., Bootle, to accommodate 400 scholars, for Rev. B. A. Kavanagh, St. Alexander, Bootle, Liverpool.

Bramhall.—Funds being raised for church institute. J. Bramley Pye, architect, Ack-lane, Cheadle Hulme.

Bristol.—An appeal being made for £30,000 to provide new headquarters for Y.M.C.A.

Broadstairs and St. Peters.—U.D.C. approved extensions, Muller School for Convalescent Children, Lanthorne-rd., for B.G., for Relief of Jewish Poor.

Carlisle.—B.E. preparing plans for additions and improvements, including gallery for swimming-baths, for T.C., at £5,000.

Castleton (Derbys).—Funds being raised for a parish hall.

Chatham.—T.C. approved Lay-out of Darland estate, A. E. Clifford & Co.; 12 houses, Beechwood-av., A. W. Little & Co.

Chester.—City Council instructed City S. to prepare plans, etc., for shelter at Saltney terminus.—F. C. Saxon, A.R.I.B.A., architect, for alterations to 24, Northgate-st.—City Surveyor been instructed to submit plan for increased lavatory accommodation at Town Hall.—Approval to be given to proposals of Cheshire Joint Board for Mentally Defective for repair and adaptation of Cranage Hall as temporary institution for mental defectives, at £9,000.

Chorley.—A. Brocklehurst & Co., F.R.I.B.A., 10, Norfolk-st., Manchester, been appointed architects for rebuilding scheme proposed by Brimscall Wesleyan Church.

Cleckheaton.—New premises for British Ropes, Ltd., are to be erected in Queen-st.

Derby.—Under decision of Building and Stores Committee of T.C., 259 houses are to be erected at Alvaston by direct labour, at £94,185.

Doncaster.—T.C. received sanction from M.H. to borrow £59,148 for 180 houses on Intake housing estate.

Dublin.—Additions are to be made to premises of F. W. Woolworth & Co. in Grafton-st., Dublin. Plans by W. Priddle, architect, Victory House, Kingsway, W.C.2.

East Ham.—B.C. approved: Alterations, 19, Plashet-grove, J. W. Lohden; alterations, 97, Browning Rd., A. H. Middleton, architect; 8 houses, Dersingham-av., Herepath Bros.; alterations, 33, High-st. North, C. Living, F.S.I.; 11 lock-up garages and 4-stall stable, 78, Ebenham-rd., A. Talbot; 13 lock-up garages, corner Canfield-rd. and Wall End-rd., Wade & Jennings.

* See also our List of Contracts, Competitions, etc.

Exmouth.—Exmouth St. John Ambulance Brigade propose £2,500 hall to plans by J. Beavis, opposite Manchester House.

Frizinghall.—Abattoir and 11 shops on Hammerton-st. site of St. James' Wholesale Market are proposed.

Gilling.—Village hall at Gilling, near Richmond (Yorks). The architect is Mr. Clayton, of Darlington.

Gillingham.—T.C. approved purchase of land at Rainham, about 8 acres, for purpose of erecting 64 houses.

Gorton.—A scheme under consideration to provide additional accommodation to schools for Church of Sacred Heart, Levenshulme-rd., for Rev. Father A. S. Fynn.

Grappenhall.—Runcorn R.D.C. propose erecting 50 houses to plans by B.E.

Great Yarmouth.—Work of filling up of dykes and erecting fence on west side of Caister-rd. to be put in hand by T.C. at £1,168.—B.S. prepared plans for fifty houses, Sturdee-av., North Denes.—B.E., amended estimate of £25,500 for constructing by-pass rd. from Caister-rd. to North Quay been approved.

Grimsby.—Markets Committee propose cattle market in Yarborough-rd., together with shops, offices and showrooms. B.E.

Hailsham.—R.D.C. proposes 20 houses on the mental hospital estate at Hellingly. G. B. Fairchild, S., 17, London-rd. Hailsham Sussex.

Hailsham.—R.D.C. approved plans for alteration to "Junction Hotel," Polegate, for Star Brewery Co.

Harrogate.—F. Trammer, A.R.I.B.A., Westminster Bank-chams., architect for Masonic Hall in Station-av. Cost £8,000.

Hastings.—£3,700 extensions are proposed at Hollington School. Sydney Little, Town Hall. Queen's-rd., B.S.

Haworth (Yorks).—Plans approved for extensions in Halifax-rd. for Rhodes Robertshaw.

Horsham.—U.D.C. is to obtain M.H. sanction to £61,000 water supply scheme.

Hull.—Branch library on the Cottingham-rd estate is decided.

Hyde.—Midland Bank proposing additions and to reconstruct existing buildings of branch. Market-st. Plans by Whinney, Son & Austen Hall, F.R.I.B.A., 6, Old Jewry, E.C.2.

Ilfracombe.—M.H. held inquiry into application of U.D.C. into sanction of £4,588 for conversion of west wing of Ilfracombe Hotel into Council offices.

Ilkeston.—C. Ridley, F.R.I.B.A., 10, Queensbury-rd., Kettering, appointed architect to prepare plans for Council's proposed houses.

Kendal.—Scheme being prepared for remodelling gas works, at £18,000.

Kidderminster.—Shops are to be erected at, "George and Dragon" in Trinity-lane, Kidderminster, for T.C. Plans by J. Hawcroft, Town Hall, Vicar-st.

Kirkby Lonsdale.—U.D.C. to purchase land at Rob Raine and erect 6 houses.

Leicester.—Mr. A. F. Bryan, A.R.I.B.A., 8, Newst., architect for Church of St. Anne's in Westernpark, for Leicester Diocesan Church Extension Board. Cost £12,000.

Leyland.—Lancashire C.C. have under consideration bridge, near Berry's Mill.

Lichfield.—Victoria Cottage Hospital have approved sketch plans for a new hospital at Lichfield by Thomas Aloysius Pole, F.R.I.B.A., 10, Gray's-sq., W.C.1.

Liverpool.—Willink & Dod, A.R.I.B.A., Cunard-buildings, Pier Head, architects for rectory in Walton Parish, for Rev. W. O. Hunter Rodwell (rector).

London (Bermondsey).—B.C. recommend £50,000 for further sewer works.—Plans approved for flats, Parnell-place.—B.C. approved dwarf wall at old fire station, Gomm-rd.

London (Brixton).—L.C.C. recommend £200 in respect of reinstatement works after a fire at 113a, Acre lane.

London (Paddington).—L.C.C. recommend borrowing of £3,924 for extension to public library, Porchester-rd., W.2, by B.C.

Luton.—T.C. passed plans for Memorial Hall in Dunstable-road, for Bury Park Congregational Church, at £3,600.

Malton.—Channon & Son, A.R.I.B.A., 4, Market-st., architects for assembly rooms, "Old Globe" hotel, Market-place.

Manchester.—J. Stevenson & Sons, Ltd., Cumberland-st., Manchester, proposing garage with frontages to Wood-st., Dolefield and Spinningfield, Deansgate. Plans by W. T. Gunson & Sons, architects, 10, Marsden-st.

Middlesbrough.—T.C. approved: 5 motor garages in connection with motor engineering and garage premises, Clarendon-rd., R. Crowe; 4 houses, Wicklow-st., R. T. Sweeting.

Newcastle-on-Tyne.—H. F. W. Liddle, L.R.I.B.A., 12, Eldon-sq., architect for reconstruction "Blue Post" public-house.

Newmarket.—S. is directed by U.D.C. to prepare plans for Fordham-rd. fire station improvements. Plans were passed for alteration at Palace House, for A. de Rothschild.

Newport (Salop).—A. N. Waters, civil engineers, 25, Temple-row, Birmingham, prepared plans for U.D.C. for pumping station to cost £7,000.

Norfolk.—Central isolation hospital is proposed at East Dereham, at £30,000. The surveyor is S. H. Warren, A.M.I.C.E., 9, Queen-st., Norwich.

North Wales.—Expenditure of over £300,000 in development of electricity supply to rural and other areas in North Wales and Cheshire is contemplated by North Wales Power Co

Nuneaton.—B.C. propose extending central school for addition of 120 scholars.

Oldham.—R.G. proposes building schemes at Union Institution at £9,000. Plans by C. T. Taylor, Roberts & Bowman, 10, Clegg-st.

Paignton.—U.D.C. approved: 10 shops, St. Michael's-rd., C. & R. E. Drew.

Preston.—R. Mercer, 11, Church-st., Preston, is architect for new Church of St. Teresa in Church-av., Preston, for Local Catholic Authorities.

Radcliffe.—W. Bradley, L.R.I.B.A., 8, Acresfield, Bolton, has been consulted by E.C. in connection with senior school proposed on the Peel Park site. It is proposed to erect assembly hall at the Technical College for E.C. Plans by Lancashire County Architect, Stephen Wilkinson, F.R.I.B.A., 16, Ribbleedale-place, Preston. Plans have been prepared for alterations to St. Mary's R.C. School, Spring-lane, for Rev. D. A. Coupe, D.D.

Rippondon.—E.C. approved scheme, including new elementary school.

Rochdale.—Licensing Justices approve structural alterations to "Coach and Horses" hotel, in Lord-st.

Ruislip-Northwood.—U.D.C. agreed to make an application to M.T. with respect to reconstruction Joel-st. bridge and Wood-lane bridge.

St. Albans.—Central school for girls and handicraft centre for boys proposed by Herts C.C. at site on Hatfield-rd., at £25,388. A senior boys' school is also recommended.

Scawthorpe.—New secondary school by West Riding E.C., at Scawthorpe, to serve new colliery townships on Leeds side of Doncaster, at £59,000

Sharnbrook.—County E.C. scheme new central school. Plans by G. P. Allen, county architect, 81, High-st., Bedford.

Sheffield.—Electricity Committee is to erect substation at Queen's-rd.

Shoreditch.—The Borough Council are proposing to purchase a site in Pool-st. and Bridport-place for housing purposes.

Sittingbourne.—U.D.C. recommend application to M.H. for £600 for alterations and additions public conveniences.

Southend.—Plans been prepared for private syndicate to build winter garden on cliff west of bandstand. It is proposed to acquire portion cliff running down to western esplanade.

South Shields.—Over £173,000 involved in three years' educational programme by Education Sub-committee.

Stockport.—Halliday & Agate, A. & L.R.I.B.A., 14, John Dalton-st., Manchester, are appointed architects for the proposed electricity showrooms and offices in St. Petersgate, for T.C.

Stockport.—Licensing Justices approve alterations to "Brewers Arms," Duke-st., for Walker & Homfrey's, Ltd., Woodside Brewery, Salford. T.C. propose large 'bus garage on old gas works site, Heaton-lane. Plans by B.E., H. Hamer, Town Hall.—Plans are prepared for conveniences at the "Touchstone Inn," Bridgefield-st., and for one to be erected in Astley's and Market-place.

Sunderland.—Plans are ready for erection of new Masonic Hall at Duro-terrace and Park-rd., Sunderland. C. A. Clayton Greene, F.R.I.B.A., architect. Barclays Bank-chams., St. Thomas-st., Sunderland.

Thorne.—R.D.C. reported that E. C. Dunn submitted plans in connection with proposal to build 200 houses on Doncaster-rd., Hatfield.

Torquay.—Corporation applied to M.H. for sanction to loan £16,000 for provision of baths at Upton for schoolchildren.

Treforest.—£100,000 development scheme for the establishment of technical college is proposed by conference headed by Glamorgan C.C. (F. E. Rees, Director of Education).

Truro.—Question of sewage disposal scheme for Truro, involving expenditure of £60,000, been subject of inquiry by M.H.

Walsall.—R.D.C. propose 20 houses, Winterley-lane, Rushall, and 18, Wolverhampton-rd., Kelsall.

Wakefield.—City Council approved: W. H. Ogden, 3 houses and 3 lock-up garages, Bienheim-rd., Mrs. L. Turner; P. O. Platts, conversion of house into offices in Northgate, for West Riding C.C.; Hustler & Taylor, architects, garage in Co-operative-st., for Wakefield Borough Co-operative Society, Ltd.

Wellington.—Premises in New-st., Wellington, are to be converted for F. W. Woolworth, Ltd. Plans by the company's architect, W. Priddle, at Victory House, Kingsway, W.C.2.

Wigan.—Corporation proposes 74 houses, Giants Hall site, at Beech Hill, at £32,171, in addition 22 houses in Chadwick-st., Poolstock, and 21 A2 type houses in Swan Meadow-rd. Plans by B.E., W. F. Garner.—B.E. prepared scheme for adaptation buildings at corner of Sovereign-rd. and Darlington-st., for Administrative Offices. Cost £2,750.

Wilts.—Factory for Avon Rubber Co., Ltd., at Melksham, is proposed. Plans by Wallis, Gilbert & Partners, F.R.I.B.A., Roland-gardens, S.W.7.

Winchester.—T.C. received M.H. sanction to £20,608 for land and houses at St. Martin's-close.

Withington.—Very Rev. Canon Rowntree, of St. Cuthbert's, Palatine-rd., proposing department at S. Cuthbert's Schools.

Wollaston.—Site given to Parochial Council in Irchester-rd. for vicarage.

Wolverhampton.—T.C. approved: Meynell & Sons, Ltd., factory, Littles-lane; G. H. Guest, 2 pairs semi-detached villas, Springfield-rd.; Wolverhampton & District Co-operative Society, extensions premises, Lichfield-st.; Governors, Wolverhampton Grammar school, extensions school, Merridale-lane; Goodyear Tyre & Rubber Co., extension pump house building, Bushbury; Electricity Committee, workmen's lavatories, Waterloo-rd.-yard; J. Gibbons, Ltd., alterations buildings, Church-lane, and new workshops, Frederick-st.

ESTIMATING ON RIGHT LINES

Everyone whose business it is to quote for building work should master the principles upon which estimating is based. These principles are clearly explained and illustrated in

'HOW TO ESTIMATE'

by J. T. REA,

a unique and invaluable work which is not excelled in thoroughness or in scope by any similar book known.

Fourth edition (now ready). 540 pages. Price 15s. net (by post 15s. 6d.). Containing thousands of prices and hundreds of examples of analysis, showing how a builder can make up rates for himself. In view of the difficulty of fixing standard prices under present conditions, the author has included an important series of Adaptation Tables and Percentages which show how rates may be adjusted to meet variations at any time.

Before purchasing any other book on this vitally important subject, you are invited to inspect this—the standard work which is in use by over 20,000 builders.

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Publishers, 94 High Holborn, London, W.C.

Employment in the Building Trade for December.

There was a further seasonal increase in the numbers unemployed during December, says the *Ministry of Labour Gazette*. Employment was slack to moderate, on the whole, with skilled operatives, and generally slack with unskilled workers; it was reported as fairly good or good at a few centres, however, including Bristol, Coventry, Luton and Southend. Much time was lost on account of the frequent gales and continuous rains, which considerably curtailed outside operations. As compared with December, 1928, employment was worse in all areas in Great Britain; it was a little better in Northern Ireland. As regards individual occupations, employment again declined with carpenters and masons, and was slack to moderate; it remained slack with bricklayers. There was some improvement with slaters, and employment was generally moderate; with plasterers and painters it continued to decline, and was very slack or bad in most districts. Employment was generally quiet with plumbers, and slack, on the whole, with tradesmen's labourers. As compared with December, 1928, employment was worse with all skilled classes, and showed little change with unskilled workers.

Housing Reduction.

A deputation from the National Federation of Building Trade Operatives, including Mr. T. Barron (President), Mr. R. Coppock (Secretary), and Mr. George Hicks, met the Minister of Health, Mr. Arthur Greenwood, at Whitehall, and for two hours discussed the question of unemployment in the building trades due to the reduction in the erection of houses. Mr. Greenwood, it is understood, told the deputation that it was very necessary there should be a continuance of house-building under the Wheatley subsidies now revived. The figures of houses to be built and contracts "let" and sanctioned by the Ministry showed an increase during the month of December, and he was hopeful the increase would continue. Something would be done shortly to deal with the slum problem. He was not yet in a position to introduce legislation, but hoped to be able to do so next session. Mr. Greenwood did not state the nature of the steps he intended to take for dealing with the question of slums, but said he had in mind the proper housing of the poorest classes, who did not appear to have been provided for in any of the subsidised buildings that had been erected. The real problem was the housing of people who were on the border line of poverty, and it was an exceedingly difficult one.

PRICES CURRENT OF MATERIALS.*

Owing to the exceptional circumstances which prevail at the present time, prices of materials should be confirmed by inquiry.

BRICKS, &c.

Per 1,000 Alongside, in River Thames up to London Bridge.

	£ s. d.
Best Stocks	4 2 6
Second Hard Stocks	3 18 6

Per 1,000. Delivered at London Goods Stations.

	£ s. d.		£ s. d.
Flettons, at King's Cross	2 12 3	Best Blue Pressed Staffs	9 5 0
Do., grooved for Plaster ...	2 14 3	Do. Bullnose ...	9 15 0
Do., Bullnose...	3 7 3	Blue Wire Cuts	7 5 0

Best Stourbridge Fire Brick :—
2½ in. ..... 8 11 0 3 in. 10 3 0

GLAZED BRICKS—

Best White Ivory, and Salt Glazed Stretchers ...	21 0 0	D'ble Str'tch'rs	29 10 0
		D'ble Headers...	28 10 0
		One Side and two Ends ...	30 10 0
Headers	20 10 0	Two Sides and one End	31 10 0
Quoins, Bullnose and 4½ in. Flats	27 10 0	Splays, and Squints	29 0 0

Second Quality, £1 per 1,000 less than best. Cream and buff, £2 extra over white. Other colours. Hard Glaze, £5 10s. extra over white.

BREEZE CONCRETE SLABS
Delivered London

	s. d.		s. d.
2 in. per yd. super.	1 11	3 in per yd. super.	2 9
2½ in. „ „	2 4	4 in. „ „	3 6

	s. d.	
Thames Ballast	9 9 per yd,	delivered 2 miles radius Paddington.
Fit Sand	12 0 „ „	
Thames Sand	12 0 „ „	
Best Washed Sand	12 6 „ „	
¾ in. Shingle for Ferro-Concrete	11 6 „ „	
½ in.	12 0 „ „	
¼ in. Broken Brick	11 6 „ „	
Pan Breeze	8 0 „ „	

Per ton delivered in London area in full van loads. Best Portland Cement. British.
Standard Specification. Test £7 8 0 to £2 8 0
20s. alongside at Vauxhall in 80-ton lots.

Ferrocrete per ton extra on above	0 7 6
Vitrocrete „ „	0 7 6
Super Cement (Waterproof)	3 16 0
Roman Cement	5 15 0
Parian Cement	5 15 0
Keene's Cement, White	5 15 0
„ „ Pink	5 10 0
Plaster, Coarse, Pink	3 0 0
„ „ White	3 12 6
„ Fine	5 12 0
Strapite, Coarse	3 9 0
„ Finish	3 17 0
Grey Stone Lime	2 10 9
Chalk Lime	2 10 9
Best Ground Blue Lias Lime	1 17 6
Hair per cwt.	2 2 6
Granite Chippings	1 12 0

NOTE.—Sacks are charged 1s. 9d. each and credited 1s. 6d. if returned in good condition within three months carr. pd.
Stourbridge Fireclay in s'cks 37s. 0d. per ton at rly. dp.

STONE.

BATH STONE.—Delivered in railway trucks at Westbourne Park, Paddington, G.W.R., or South Lambeth, G.W.R., per ft. cube ..... s. d. 2 10

BEER STONE—RANDOM BLOCK—
Free on rail at Seaton Station per ft. cube 2 3
Delivered free on rail Nine Elms, S.R. per ft. cube 3 1½
Selected approximate size one way, 1d. per cubic foot extra; selected approximately three sizes or for special work, 3d. per cubic foot extra.

PORTLAND STONE.—
Brown Whitbed, in random blocks of 20 ft. average, delivered in railway trucks at Nine Elms, S. Rly., South Lambeth Station, G.W.R., and Westbourne Park, Paddington, G.W.R., per ft. cube 4 4½
Do. do. delivered on road wagons at above stations, per ft. cube 4 5½
White basebed, 3d. per ft. cube extra.
NOTE.—1d. per ft. cube extra for every foot over 20 ft *average*, and ½d. beyond 30 ft.

HOPTON-WOOD STONE.—
F.O.R. Quarries, Wirksworth, Derbyshire. s. d.
Random blocks from 10 ft. and over P. ft. cb. 14 0
Sawn two sides „ 22 6
Sawn three or four sides „ 27 6

YORK STONE, BLUE—*Robin Hood Quality*.
Delivered at any Goods Station, London.
6 in. sawn two sides landings to sizes (under 30 ft. super) ..... Per ft. super 5 6
6 in. rubbed two sides, ditto ..... „ 6 0
3 in. sawn two sides slabs (random sizes) „ 2 3½
2 in. to 2½ in. sawn one side slabs (random sizes) ..... „ 1 6½
1½ in. to 2 in. ditto, ditto ..... „ 1 3½

HARD YORK—
Delivered at any Goods Station, London.
Scappled random blocks ..... Per ft. cube 6 3
6 in. sawn two sides landing to sizes (under 40 ft. super) ..... Per ft. super 5 1½
6 in. rubbed two sides, ditto ..... „ 6 1½
4 in. sawn two sides slabs (random size) „ 2 1½
3 in. ditto ditto „ 2 10
2 in. self-faced random flags ..... Per yd. super 5 6

CAST STONE.

Delivered in London area in full van loads, per ft. cube: Plain, 2s. 6d.; Moulded, 2s. 6d.; Cills, 10s. 0d.

WOOD.

GOOD BUILDING DEAL.

Inches.	per stan.	Inches.	per stan.
4 × 11	£30 0	3 × 6	£21 0
4 × 9	24 0	3 × 11	25 0
4 × 8	25 0	2 × 11	26 0
4 × 7	23 0	3 × 9	24 0
3 × 9	22 0	2½ × 9	24 0
3 × 7	22 0	3 × 4½	21 0
2½ × 7	21 0	3 × 4	21 0

PLANED BOARDS.

1 × 11	£30 0	1 × 9	£28 0

PLAIN EDGE FLOORING

Inches.	per sq.	Inches.	per sq.
⅝	18/-	1¼	30/-
¾	21/-	1½	34/-
1	24/-		

TONGUED AND GROOVED FLOORING

Inches.	per sq.	Inches.	per sq.
1	24/-	⅝	16/6
1¼	30/-	¾	19/-
1½	34/-	1	24/-

Ins. BATTENS. s. d. SAWN LATHS. s. d.
½ × 2 ..... per 100 ft. 2 6 Per bundle 2 6

1" AND UP THICK.

	£ s. d.	£ s. d.
Dry Austrian Wainscot, per ft. cube	0 16 0	to 0 18 0
Dry American and/or Japanese Figured Oak, ft. cube	0 14 0	to 0 15 0
Dry American and/or Japanese Plain Oak, ft. cube	0 10 0	to 0 13 0
Dry sq. edged Honduras Mahogany, ft. cube	0 15 0	to 0 18 0
Dry Log cut Honduras Mahogany, ft. cube	0 16 0	to 1 1 0
Dry Cuba Mahogany, ft. cube	1 1 0	to 1 10 0
Dry Teak, ft. cube	0 13 0	to 0 15 0
Dry American Whitewood, ft. cube	0 10 0	to 0 14 0
Best Scotch Glue, per cwt.	4 10 0	to —
Liquid Glue, per cwt.	4 7 0	to 5 10 0

SLATES.

First quality slates from Bangor or Portmadoc carriage paid in full truck loads to London Rate Station. Per 1,000 actual.

	£ s. d.		£ s. d.
24 by 12	31 0 0	18 by 10	17 5 0
22 by 12	27 10 6	18 by 9	15 10 0
22 by 11	25 5 0	16 by 10	14 14 6
20 by 12	24 7 6	16 by 8	11 5 0
20 by 10	20 17 6		

TILES.

Delivered at London rate stations in full truckloads of not less than 6 tons.

	Per 1,000. f.o.r. London. £ s. d.
Best machine-made tiles from Broseley or Staffordshire district	25 2 6
ditto hand-made ditto	5 7 6
Ornamental ditto	5 12 6
Hip and valley tiles (per dozen) { Hand-made	0 9 6
{ Machine-made	0 9 0

METALS.

JOISTS, GIRDERS, &c., TO LONDON STATION, PER TON—

R.S. Joists, cut and fitted	£12 10 0
Plain Compound Girders	14 10 0
„ Stanchions	16 10 0
„ In Roof Work	19 10 0

MILD STEEL ROUNDS.—To London Station, per ton

Diameter.	£ s. d.	Diameter.	£ s. d.
½ in.	12 0 0	⅝ in. to ¾ in.	10 15 0
⅜ in.	11 0 0	⅞ in. to 2½ in.	10 10 0

WROUGHT-IRON TUBES AND FITTINGS—
(Discount off List for lot of not less than £7 net value delivered direct from Works, 2½ per cent, less above gross discounts, carriage forward, if sent from London Stocks.)

	Tubes. Wrought Iron Mild Steel.	Tubes. Genuine Staffs. Iron.	Fittings. ½ in. and under.	Fittings. Over ½ in.	Flanges. ½ in. and under.	Flanges. Over ½ in.
	%	%	%	%	%	%
Gas	65	52½	45	47½	55	57½
Water	61½	48½	40	42½	50	52½
Steam	57½	45	35	37½	45	47½
Galv. gas	52½	40	35	37½	45	47½
Galv. water	47½	35	30	32½	40	42½
Galv. steam	42½	30	25	27½	35	37½

*C.I.—HALF-ROUND GUTTERS—London Prices ex Works

Per yd. in 6 ft. lengths.	Gutters.	Angles and Nozzles.	Stop Ends.
3 in.	10d.	7½d.	2½d.
3½ in.	10½d.	8½d.	2½d.
4 in.	10½d.	9½d.	2½d.
4½ in.	11½d.	10½d.	2½d.
5 in.	1/1½	11½d.	3½d.

*O.G. GUTTERS.

3 in.	1/0	10½d.	2½d.
3½ in.	1/0½	10½d.	2½d.
4 in.	1/1½	10½d.	2½d.
4½ in.	1/2½	1/0½	2½d.
5 in.	1/5	1/2½	3½d.

*RAIN-WATER PIPES, &c.

Per yd. in 6 ft.	Pipe.	Bends, stock Branches, angles.	stock angles.
2 in. plain	1/2½	9½d.	1/2
2½ in. „	1/3	10½d.	1/4½
3 in. „	1/6½	1/1½	1/8½
3½ in. „	1/11	1/4½	1/11½
4 in. „	2/2½	1/7½	2/4½

*The above R.W. Goods prices are subject to an advance of 5% from October 29th, 1929.

L.C.C. COATED SOIL PIPES—London Prices ex Works.

	Bends, stock Branches, Pipe, angles.	stock angles.
	s. d.	s. d.
2 in. per yd. in 6 fts. plain	2 5	1 9
2½ in. „	2 9½	1 10½
3 in. „	3 0	2 1
3½ in. „	3 3	2 7
4 in. „	3 8	2 11

L.C.C. COATED DRAIN PIPES—London Prices ex Works

	Bends, stock Branches, Pipe, angles.	stock angles.
	s. d.	s. d.
3 in. per yd. in 9ft. lengths	3 6	4 6
4 in. „ „	4 8	5 5
5 in. „ „	6 9	9 6
6 in. „ „	7 3	11 6

		s. d.
	7	9
	9	15
	10	19

Gaskets for jointing, 41/- per cwt.

IRON—	Per ton in London. £ s. d.		£ s. d.
Common bars	11 0 0	to	12 0 0
Staffordshire Crown Bars—Good merchant quality	11 10 0	to	12 10 0
Staffordshire Marked Bars	14 0 0	...	15 0 0
Mild Steel Bars	10 0 0	...	11 0 0
Steel Bars, Ferro-Concrete quality, basis price	9 10 0	...	10 10 0
Hoop iron, basis price	11 10 0	...	12 10 0
„ Galvanised	27 0 0	...	28 0 0
Soft Steel Sheets, Black—Ordinary sizes, to 20 g.	11 10 0	...	12 0 0
„ „ „ 24 g.	13 0 0	...	14 0 0
„ „ „ 26 g.	15 0 0	...	16 0 0
Sheets Flat Best Soft Steel, C.R. and C.A quality—Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	15 0 0	...	16 0 0
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 22 g. and 24 g.	16 0 0	...	17 0 0
Ordinary sizes, 6 ft. by to 3 ft. to 26 g.	18 0 0	...	20 0 0

No. 1 quality £4 per ton extra.

Flat and Galvanised Corrugated Sheets—Ordinary sizes, 6 ft. to 9 ft. to 20 g.	15 10 0	...	16 10 0
Ordinary sizes, 6 ft. to 9 ft. to 22 g. and 24 g.	16 0 0	...	17 0 0
Ordinary sizes, 6 ft. to 9 ft. to 26 g.	19 0 0	...	20 0 0
Sheets Galvanised Flat, Best quality—Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	21 0 0	...	22 0 0
Best Soft Steel Sheets, 22 g. and 24 g.	23 0 0	...	25 0 0
Best Soft Steel Sheets, 26 g.	24 10 0	...	25 10 0
Cut Nails, 3 in. to 6 in.	16 0 0	...	17 0 0

(Under 3 in. usual trade extras.)

METAL WINDOWS.—Standard sizes, suitable for complete houses, including all fittings, painting two coats, and delivery to job, average price about 1s. 4d. to 1s. 7d. per foot super.

LEAD, &c.

	£ s. d.
(Delivered in London.)	
LEAD—Sheet. English, 4 lb. and up	30 5 0
Pipe in coils	30 15 0
Soil pipe	33 15 0
Compo pipe	34 15 0

NOTE.—Country delivery, 20s. per ton extra; lots under 3 cwt. 3s. per cwt. extra, and over 3 cwt. and under 5 cwt., 1s. 6d. per cwt extra. Cut to sizes, 5s. cwt. extra.

Old lead, ex London area, at Mills ..... per ton	20 0 0

COPPER.

		s. d.
Seamless Copper tubes (basis)	per lb.	1 3
Strong sheet	„	1 0
Thin	„	1 1
Copper nails	„	1 11
Copper wire	„	2 0

PLUMBERS' BRASS WORK.
Delivered in London.

NEW RIVER PATTERN SCREW DOWN BIB COCKS FOR IRON.

½ in. ¾ in. 1 in. 1¼ in. 1½ in. 2 in.
29/- 45/- 76/- 153/- 246/- 510/- per doz.

NEW RIVER PATTERN SCREW DOWN STOP COCKS AND UNIONS.

½ in. ¾ in. 1 in. 1¼ in. 1½ in. 2 in.
41/6 62/- 92/- 174/- 300/- 588/- per doz.

RIVER PATTERN SCREW DOWN MAIN FERRULES.

½ in. ¾ in. 1 in.
30/6 40/- 116/6 per doz.

CAPS AND SCREWS.

1¼ in. 1½ in. 2 in. 2½ in. 3 in. 3½ in. 4 in.
7/6 10/- 14/- 23/- 30/- 42/- per doz.

DOUBLE NUT BOILER SCREWS.

½ in. ¾ in. 1 in. 1¼ in. 1½ in. 2 in.
9 11/- 17/- 29/- 36/- 63/- per doz.

BRASS SLEEVES.

1½ in. 2 in. 3 in. 3½ in. 4 in.
10/- 12/- 20/- 24/- 31/- per doz.

NEW RIVER PATTERN CROYDON BALL VALVES, S.F.

½ in. ¾ in. 1 in. 1¼ in. 1½ in.
35/- 56/- 98/- 162/- 228/- per doz.

DRAWN LEAD P. & S. TRAPS WITH BRASS CLEANING SCREW.

1½ in. 1½ in. 2 in. 3 in.
6 lbs. P. traps ... 33/- 41/- 56/- 101/- per doz.
6 lbs. S. traps ... 35/- 45/- 66/- 128/- „

TIN.—English Ingots, 2/3 per lb. SOLDER.—Plumber's 1/-, Tinmen's 1/2, Blowpipe 1/3 per lb.

PAINTS, &c.

Raw Linseed Oil, in pipes	per gallon	0	4 2
„ „ „ in barrels ...	„	0	4 4
„ „ „ in drums ...	„	0	4 6
Boiled „ „ in barrels ...	„	0	4 6
„ „ „ in drums ...	„	0	4 9
Turpentine in barrels	„	0	3 11
„ in drums (10 galls)	„	0	4 1
Genuine Ground English White Lead, per ton		54	0 0

(In not less than 5-cwt. casks.)
Extra for 1-cwt. kegs over 5-cwt. casks is 5/0 cwt.

* The information given on this page has been specially compiled for THE BUILDER, and is copyright. The aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the highest or lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information.

PRICES CURRENT OF MATERIALS (*contd.*

PAINTS, &c. (*contd.*)

		£	s.	d.
Genuine White Lead Paint. "Father Thames," "Nine Elms," "Park," "Supremus," "St. Paul's," "Morgan-rwyg," "Palace," "J." Brand, and other best brands (in 14-lb. tins) not less than 5 cwt. lots ... per ton delivered		73	10	0
Red Lead, Dry (package extra)	per ton	40	0	0
Best Linseed Oil Putty	per cwt.	0	15	6
Filleol	,,	0	15	6
Size, XD quality	ftn.	0	3	0

GLASS.

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.

	Per ft.		Per ft.
15 oz. fourths ...	2½d.	32 oz. fourths ...	6½d.
15 ,, thirds ...	3½d.	32 ,, thirds ...	9d.
21 ,, fourths ...	3½d.	Obscured Sheet, 15 oz.	2½d.
21 ,, thirds ...	4½d.	,, 21 oz.	4½d.
26 ,, fourths ...	4½d.	Fluted, 15oz. 6'd.,21oz.	6d.
26 ,, thirds ...	6½d.	En'lled,15oz. 4½d.,21oz.	6d.

Extra price according to size and substance for squares cut from stock.

ENGLISH ROLLED plate in CRATES OF STOCK SIZES.

	Per ft.
¼ Rolled plate	4½d.
⅜ Rough rolled	5½d.
Rough rolled	5½d.
Figured Rolled, Baltic, Oceanic, Arctic Stippolyte, and small and large Flemish White...	5½d.
Ditto, tinted	8½d.
Rolled Sheet	4½d.
White Rolled Cathedral	4½d.
Tinned do.	6½d.

Cast plate is same price as rough rolled.

VARNISHES, &c.

		Per Gallon £	s.	d.
Oak Varnish	Outside	0	14	0
Fine ditto	ditto	0	16	0
Fine Copal	ditto	0	18	0
Pale Copal	ditto	1	0	0
Pale Copal Carriage	ditto	1	4	0
Best ditto	ditto	1	12	0
Floor Varnish	Inside	0	15	0
Fine Pale Paper	ditto	0	18	0
Fine Copal Cabinet	ditto	1	2	6
Fine Copal Flatting	ditto	1	0	6
Hard Drying Oak	ditto	0	18	0
Fine Hard Drying Oak	ditto	0	19	0
Fine Copal Varnish	ditto	1	0	0
Pale ditto	ditto	1	12	0
Best ditto	ditto	1	2	6
Best Japan Gold Size		0	12	6
Best Black Japan		0	10	0
Oak and Mahogany Stain (water)		0	12	0
Brunswick Black		0	7	6
Berlin Black		0	14	0
Knotting (patent)		1	5	0
French and Brush Polish		0	17	0
Liquid Dryers in Terebine		0	9	0
Outside Black Enamel		0	7	0

THE SCOTTISH BUILDER

HISTORICAL MONUMENTS IN SCOTLAND

Monuments and constructions in the counties of Mid Lothian and West Lothian are the subject of the 10th report of the Royal Commission appointed to make an inventory of ancient and historical monuments in Scotland and to specify those which seem most worthy of preservation. The City of Edinburgh and Leith and its immediate environs are not included in the report. The Commissioners say that the area, where not purely agricultural, has been much affected by industrial operations. The most important monuments include Romanesque or Norman church work, collegiate churches of the fifteenth century, mediæval castles, the Royal Palace of Linlithgow, and buildings which help to illustrate the later developments of the dwelling-house of the Scottish laird. Appended to the report are lists of monuments and constructions which appear to be specially in need of protection, and of others considered worthy of preservation, but not in imminent risk of demolition or decay. The report is published by His Majesty's Stationery Office at the price of 2d.

NEW BUILDINGS IN SCOTLAND

The Editor would be glad to receive information for publication under this heading from architects, builders, or other persons concerned. Items should be received at THE BUILDER *office not later than Tuesday evening.*

Ayr.—Houses.—The Ayr Dean of Guild Court has passed the following plans :—Double bungalow in Bellevale-avenue for W. Drinnan, joiner, George-street, cost £1,700; block of four houses in Seaforth-road for the Corporation, cost £1,280.

Ayr.—Houses.—The Ayr Town Council has agreed to the erection during the year of 200 additional houses, 80 of which will be erected on the Newton-on-Ayr glebe, acquired recently at a cost of £2,500, under a slum clearance scheme.

Aberdeen.—Reconditioning.—The Streets and Works Committee of the Aberdeen Town Council have agreed to recommend to the Council that the contract for the reconditioning of the old aqueduct from Invercannie to Aberdeen be given to Messrs. Wm. Tawse, Ltd., Aberdeen. The work will cost £70,365 7s.

Bo'ness.—Houses.—The Bo'ness Town Council have agreed to borrow £9,500 for the erection of 24 houses at Bridgeness under their fifth development scheme.

Campbeltown. — Bathing Pond. — The Campbeltown Town Council have decided to apply for £10,000 to the Unemployment Grants Committee for the erection of a bathing pond on the shore at Kilkerran.

Dundee.—Buildings.—Plans and sections of the following proposed new buildings, etc., have been lodged at the Office of the City Engineer :—Blackness-road and Elm-street—temporary workshop for the Blackness Joinery Co., Mr. J. Johnston, architect, 32, Bank-street; Grove-road—garage for Mr. G. Howieson, Mr. W. M. Wilson, architect, 61, Meadowside; Kinghorne-road—bungalow for Mr. John Brown, Messrs. Gordon & Scrymgeour, architects, 7, Ward-road; Lilybank-road—alterations and additions for the Town Council; Nethergate—alterations for Messrs. Rossleigh, Ltd., Mr. W. B. D. Keith, architect, 10, Whitehall-street; and Somerville-place—alterations for Mr. Lowrie, Messrs. Johnston & Baxter, architects, 114, Seagate.

Edinburgh.—School.—The Authority are prepared to receive tenders for the erection of Prestonfield School. Mr. John Stewart, Education Offices, Castle-terrace, Edinburgh, is the Executive Officer.

Edinburgh.—Buildings.—The Edinburgh Dean of Guild Court has granted the following building warrants :—City—boundary walls at Inchdrewer house, Colinton; W. White Hamilton—two double bungalows and four garages at Riselaw-terrace; Martin's Bakery, Ltd.—additions and alterations at 136 and 138, High-street, Portobello; W. Philp—double villa and double garage at Telford-road, Blackhall.

Inverness.—Road.—Official information has been received in Inverness that the M.T. have approved the acceptance of an offer for the reconstruction of the first part of the Glasgow-Inverness road. The offer is that of Messrs. Alston Limestone Co., Ltd., Newcastle, and is for the part of the road stretching between North Ballachulish and Fort William. The second section of the road is from Laggan to Fort Augustus, and the third section from Fort Augustus to Inverness. Altogether the work will involve the reconstruction of about eighty miles of roadway at an approximate cost of £900,000.

Kelty.—Houses.—The District Committee of Dunfermline has submitted proposals to the Department of Health for the erection of 80 houses at Kelty under a slum clearance scheme.

Kilmarnock.—Sewage.—The Town Council of Kilmarnock has decided to proceed with a sewage disposal scheme at an estimated cost of £160,000.

Motherwell.—Premises.—Many changes are foreshadowed in Motherwell owing to the acquisition by Messrs. Woolworth of an important block of property in Brandon-street at the Cross. The premises are at present occupied by Mr. R. C. Foulis, grocer, and Mr. T. Duncan, draper.

Troon.—Pavilion.—Consideration has been given by the Troon Town Council to the erection at South Beach of Council Chambers and an entertainment pavilion, the latter to accommodate about 1,000 persons.

BUILDING TRADE WAGES IN SCOTLAND*

The following are the present rate of wages in the building trade in the principal towns of Scotland. Every endeavour is made to ensure accuracy, but we cannot be responsible for errors that may occur.

	Masons.	Bricklayers.	Carpenters, Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Labourers—Masons'‡ Bricklayers'† Plasterers'†
Aberdeen	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2½ †1/2½
Airdrie	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2½ †1/2½
Alexandria	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2½ †1/2½
Arbroath	1/6½	1/6½	1/6½	1/7½	1/6½	1/6½	1/5½	1/1
Ayr	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	1/2½
Bathgate	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/8½	1/2 to 1/3
Blairgowrie	1/7	1/7	1/7	1/7½	1/8	1/7	1/4	10d. to 1/-
Bo'ness	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2½ †1/2½
Coatbridge	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2½ †1/2½
Dumbarton	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2½ †1/2½
Dumfries	1/6½	1/6½	1/6½	1/7½	1/6½	1/6½	1/6½	1/2
Dundee	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/3 †1/2½
Dunfermline	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/7½	‡1/2½ †1/2½
Edinburgh	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/3½ †1/2½
Falkirk	1/7½	1/7½	1/7	1/8	1/7	1/7	1/8½	1/2½
Fort William	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/2
Galashiels	1/6½	1/7	1/6½	1/7	1/6½	1/6½	1/7	1/2
Glasgow	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2½ †1/2½
Greenock	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/7	1/2½
Hamilton	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2½ †1/2
Hawick	1/7	1/7	1/7	1/7-1/7½	1/7	1/7	1/7	1/2½
Helensburgh	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	1/2½
Inverness	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/- to 1/2
Kilmarnock	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	1/2½
Kirkcaldy	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2½ †1/2½
Kirkwall	1/5	1/5	1/4	1/5	1/5	1/4	1/4	1/-
Lanark	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/3½ †1/2½
Leith	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/3½ †1/2½
Motherwell	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/3½ †1/2½
Perth	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/3½ †1/2½
Stirling	1/6½	1/7½	1/7½	1/8½	1/7½	1/7½	1/7½	1/2½
Stirlingshire (Eastern District)	1/7½	1/9	1/7½	1/8½	1/7½	1/7½	1/8	1/2½
Wishaw	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2½ †1/2½

* The information given in this table is copyright. The rates of wages in the various towns in England and Wales are given on page 236.

CURRENT PRICES FOR BUILDING WORK IN LONDON*

EXCAVATOR.

		s.	d.
Digging and throwing or wheeling and filling carts, and carting away to shoot—6 ft. deep	per yard cube	11	0
Add if in clay	" "	1	0
Add for every additional depth of 6 ft.	" "	0	6
Planking and strutting to trenches	per foot super	0	5
Do. to sides of excavation, including shoring	" "	1	0

CONCRETOR.

		s.	d.
Portland cement concrete in foundation 1 to 6	per yard cube	38	0
Add if in underpinning in short lengths	" "	7	0
Add if in floors 6 in. thick	" "	3	3
Add if in beams	" "	3	9
Add if aggregate 1 : 2 : 4	" "	10	0
Add for hoisting not exceeding 10 ft. beyond the first 10 ft.	" "	2	6

BRICKLAYER.

		£	s.	d.
Reduced brickwork in lime mortar and Fletton bricks	per rod	32	0	0
Add if in stocks	"	7	10	0
Add if in Staffordshire blues	"	22	0	0
Add if in Portland cement and sand	"	1	10	0

FACINGS.

		s.	d.
Extra for facing in English or Flemish bond for every 10s. per 1,000 over the price of the common bricks	per ft. super	0	1½

POINTING.

		s.	d.
Neat flat struck or weathered joint	"	0	3

ARCHES.

		s.	d.
Extra only to the price of ordinary brickwork :—			
Fair external in half brick rings	" "	0	10
Axed in stocks	" "	1	9
Rubbed and gauged jointed in putty camber or segmental	" "	6	0

SUNDRIES.

		s.	d.
Damp course in double course of slates breaking joint and bedded in Portland cement	" "	1	0
Setting ordinary register grates and stoves	each	1	0
Setting kitchener, including forming fines, &c., with all necessary fire bricks	"	4	15

ASPHALTER.

		s.	d.
Half-inch horizontal damp course	per yard super	4	6
Three-quarter-inch vertical damp course	" "	9	6
Three-quarter-inch on flats in two thicknesses	" "	6	3
Angle fillet	per foot run	0	3
Skirting and fillet 6 in. high	" "	1	2

MASON.

		s.	d.
York stone templates fixed	per foot cube	13	0
York stone sills fixed	" "	22	0
Bath stone and all labour fixed	" "	10	6
Beer stone and all labour fixed	" "	15	0
Portland stone fixed	" "	20	0

SLATER.

		s.	d.
Welsh 16 in. × 8 in. 3 in. lap, including nails	per square	72	9
Do. 20 in. × 10 in. Do. Do.	"	80	9
Do. 24 in. × 12 in. Do. Do.	"	90	0

CARPENTER AND JOINER.

		s.	d.
Fir framed in plates	per foot cube	5	0
Do. joists	" "	5	6
Do. roofs, floors and partitions	" "	6	0
Do. trusses	" "	8	6

		¾"	1"	1¼"	2"
Deal rough close boarding	per sq.	35/6	40/-	45/-	72/-

		s.	d.
Flat centering for concrete floor, including struts or hangers	"	50	0
Do. to beams	per ft. sup.	0	11
Centre for arches	"	1	6
Gutter boards and bearers	"	1	0

FLOORING.

		¾"	1"	1¼"	1¼"
Deal-edges shot	per sq.	—	44/6	53/-	60/6
Do. tongued and grooved	"	—	49/-	57/6	65/-
Do. matchings	"	45/-	51/-	—	—
Moulded skirting, including backings and grounds	per ft. sup.	1/6	1/9	2/-	2/6

SASHES AND FRAMES.

		s.	d.
One-and-a-half moulded sashes or casements	per foot super	1	10
Two Do. Do. Do.	" "	2	1
Add for fitting and fixing	" "	0	3
Deal-cased frames with 1 in. inner and outer linings, 1½ in. pulley stiles tongued to linings, hard wood sills with 2 in. moulded sashes in squares, double hung, double hung with pulleys, lines and weights ; average size	" "	3	9

DOORS.

		1½"	1¾"	2"
Two-panel square framed	per ft. sup.	2/1	2/4	2/6
Four-panel Do.	"	2/5	2/8	2/11
Two-panel moulded both sides	"	2/8	2/11	3/2
Four-panel Do. Do.	"	2/11	3/2	3/5

CARPENTER AND JOINER—continued.

FRAMES.

		s.	d.
Deal wrot moulded and rebated	per foot cube	14	0

		1"	1¼"	1½"
Plain deal jamb linings framed	per ft. sup.	1/7	1/8	1/11
Deal shelves and bearers	"	1/4	1/6	1/9
Add if cross-tongued	"	2d.	2d.	2d.

STAIRCASES.

	1"	1¼"	1½"	2"	2½"
Deal treads and risers in and including rough brackets	2/1	2/4	2/9	—	—
Deal strings wrot on both sides and framed	1/8	2/-	2/2	2/8	—

		s.	d.
Housings for steps and risers	each	0	11
Deal balusters, 1 in. × 1¼ in.	per ft. run	0	9
Mahogany handrail : average, 3 in. × 3 in.	" "	6	0
Add if ramped	" "	12	0
Add if wreathed	" "	24	0

FIXING ONLY IRONMONGERY (INCLUDING SCREWS).

6 in. barrel bolts	8½d.	Rim locks	2/-
Sash fasteners	11½d.	Mortice locks	4/6
Casement fasteners	1/5	Patent spring hinges and letting into floor and making good	19/-
Casement stays	1/2		
Cupboard locks	1/5		

FOUNDER AND SMITH.

		s.	d.
Rolled steel joists	per cwt.	16	3
Plain compound girders	"	19	0
Do. stanchions	"	21	9
In roofwork	"	27	6

RAIN-WATER GOODS.

		3"	4"	5"	6"
Half-round plain rebated joints	ft. run	1/6	1/9	2/-	2/6
Ogee Do. Do.	"	1/9	2/-	2/6	3/3
Rain-water pipes with ears	"	1/9	2/7	—	—
Extra for shoes and bends	each	4/4	5/11	—	—
Do. stopped ends	"	1/11	2/4½	3/7	4/-
Do. nozzles for inlets	"	2/2	2/7	3/10	4/3

PLUMBER.

		s.	d.
Milled lead and laying in flashings and gutters	per cwt.	44	0
Do. Do. in flats	"	43	0
Extra labour and solder in coated cesspools	each	6	9
Welf joint	per ft. run	0	6
Soldered seam	" "	1	3
Copper nailing	" "	0	3

		½"	¾"	1"	1½"	2"	4"
Drawn lead waste	per ft. run	1/2	1/9	2/-	3/4	4/-	—
Do. service	"	1/8	2/2	2/7	3/10	—	—
Do. soil	"	—	—	—	—	—	6/9
Bends in lead pipe	each	—	—	—	—	3/3	8/2
Soldered stop ends	"	1/2	1/8	2/1	2/10	3/6	—
Red lead joints	"	11d.	1/-	1/3	1/11	2/4	4/10
Wiped soldered joints	"	2/10	3/6	4/-	4/11	6/6	9/9
Lead traps and cleaning screws	"	—	—	—	14/7	19/6	—
Bib cocks and joints	"	6/4	9/7	15/4	41/-	—	—
Stop cocks and joints	"	15/4	17/2	25/8	64/-	—	—

PLASTERER.

		s.	d.
Render, float and set in lime and hair	per yard sup.	2	6
Do. Do. Sirapite	" "	2	9
Do. Do. Keen's	" "	4	0
Add saw lathing	" "	1	7
Add metal lathing	" "	2	6
(Not including hangers or runners, etc., for suspended ceilings.)			
Portland cement screed	" "	2	2
Do. plain face	" "	3	3
Mouldings in plaster	per 1 girth	0	1½
One-and-a-half granolithic pavings	per yard sup.	5	6

GLAZIER.

		s.	d.
21-oz. sheet plain	per foot sup.	0	8½
26-oz. Do.	" "	1	0
Obscured sheet	" "	1	1
¼-in. rolled plate	" "	0	9
¼-in. rough rolled or cast plate	" "	0	10½
¼-in. wired cast plate	" "	1	4

PAINTER.

		s.	d.
Preparing and distempering, 2 coats	per yard sup.	0	9
Knotting and priming	" "	0	7
Plain painting, 1 coat	" "	0	9
Do. 2 coats	" "	1	2
Do. 3 coats	" "	1	9
Do. 4 coats	" "	2	4
Graining	" "	2	3
Varnishing twice	" "	1	9
Sizing	" "	0	3
Flatting	" "	0	7
Enamel	" "	1	1
Wax polishing	per foot sup.	0	6
French polishing	" "	1	3
Preparing for and hanging paper	per piece, 2/- to 4/-		

* These prices apply to *new buildings only*. They cover superintendence by foreman and carry a profit of 10% on the prime cost without establishment charges. A percentage of 1½ should be added for Employers' Liability and National Health and Unemployment Acts and from 1s. 6d. per £100 for Fire Insurance. The whole of the information given on this page is copyright.

BUILDING TRADE NEWS

Building Societies.

Sir Enoch Hill, president and managing director of the Halifax Building Society, speaking at the opening of a daily branch of the Halifax Society in Blackburn, said that the building society movement of the country had a membership, including depositors, of over two million individuals, and it was assisting self-helping men and women to become owners of their homes to the extent of over 500,000. The homes which had been acquired by building society assistance numbered over two million, providing accommodation for something like ten million people.

Dublin Master Builders.

At the annual general meeting of the Master Builders' Association in Dublin the following officers were elected for the ensuing year :—President, Mr. Alex. E. Hull; First Vice-President, Mr. James J. Flynn; Second Vice-President, Mr. James Clarke; Hon. Treasurer, Mr. Harold V. Mellon; Council, Messrs. R. Denne Polton, T. A. Crampton, J. Walter Beckett, T.D., William M. Thompson, J. Good, T.D., J. Cooper, H. C. McNally, John Kenny, George Martin, W. Bolger, James Murphy, J. Townley.

Testing Timber.

The British Engineering Standards Association has just published a Specification for Methods of Testing Small Clear Specimens of Timber, No. 373-1929, for the purpose of comparing the mechanical properties of one species of timber with another. The specification covers the standard methods for carrying out the following tests :—Moisture content, compression, static bending, impact hardness, cleavage, shear tension, specific gravity and shrinkage, and includes a table showing the tests recommended to indicate the suitability of timber for specific uses. The association has worked in close touch with the Forests Products Research Laboratory in the preparation of the specification. Copies of the specification may be obtained from the B.E.S.A., Publications Department, 28, Victoria-street, S.W.1, price 2s. 2d., post free.

Merchandise Marks.

An Order in Council entitled the Merchandise Marks (Imported Goods), No. 5 Order, 1929, was made on December 17. It requires the following classes and descriptions of imported goods to bear an indication of origin :—1. Scientific glass-ware, as from March 17, 1930; 2. Domestic, fancy and illuminating glass-ware, as from June 17, 1930; 3. Hosiery, as from August 1, 1930; 4. Implements and tools, as from July 1, 1930; 5. Steel nails, as from March 17, 1930; 6. Portland cement, as from March 17, 1930; 7. Asbestos cement products, as from March 17, 1930; 8. Wood split pulleys, as from March 17, 1930. The Order will apply to the goods specified above at the time of sale and exposure for sale. In the case of scientific glass-ware it will also apply at the time of importation. The text of the Order in draft form was printed in the Board of Trade Journal on November 7, 1929. The Order in Council as made is being published and copies will shortly be obtainable at any of H.M. Stationery Offices.

New League Buildings, Geneva.

The Building Committee of the League of Nations has issued details of the procedure to be followed by firms tendering for the construction of the new League buildings. Three buildings are to be erected, the Great Assembly Hall, the Secretariat building, and the Library. In view of the impossibility of publishing separate advertisements of each tender in the Press of all member States, it has been decided to establish a list of approved firms in all trades, and applications for registration will be made on the basis of the following conditions :—Firms in all trades wishing to tender should forward to the Secretariat of the League of Nations, Geneva, their name and references, indicating exactly the work for which they desire to compete. They should appoint an accredited representative in Europe to deal with documents relating to the contract conditions. Tenders must be accompanied by a deposit, but this will be returned to unsuccessful competitors. It will be forfeited to the League if the firm to whom a contract is allotted should decline it for any reason. The amount may vary from 1 to 2 per cent. of the estimated amount of the contract. Fifteen days after the invitation to tender competitors may consult at the architects' office in Geneva the contract conditions, plans and other drawings. Applications should be addressed to the Secretary, Building Committee, League of Nations, Geneva.

Protection for Mortar and Concrete against Frost.

A special report has been issued by the Department of Scientific and Industrial Research dealing with the "Use of Calcium Chloride or Sodium Chloride as a Protection for Mortar or Concrete against Frost."

There is an extensive literature on the effect of employing calcium chloride or sodium chloride as a protection for mortar or concrete against frost. For domestic purposes at the Building Research Station, and in order to enable the station to deal with frequent inquiries on the subject, it was felt desirable to prepare a summary. This summary, by Dr. Thomas, shows that, although a great deal of experimental work has been done in the past by different investigators, there still remains a considerable amount of uncertainty, and often the results are, apparently, at variance. The variations may be due occasionally to differences in the test conditions, but it is suspected that the causes are of a more fundamental nature. The exact significance of the variations has not been determined, and the station has not, so far, been able to devote its attention to the study, which is evidently necessary, of the more fundamental aspects of the reactions involved. The report therefore does not purport to present new information on the effects of the salts—it is somewhat in the nature of an extended bibliography—but it is published in its present form for the convenience of those who desire some information on the subject from the Building Research Station. It may be obtained, price 9d., at any of H.M. Stationery Offices.

REPORTS, ETC.

P.W.D. Nigeria.

The annual report for 1928 on the Nigeria P.W.D. gives some inkling of the considerable magnitude of the work carried out by this Department. A total mileage of 3,453 of roads was maintained and 304 miles of new roads were constructed. Forty-five bridges were completed and some 3,700 feet of bridgework was in hand at the end of the year. 349 new European and African quarters were completed during the year (as against 265 in 1927). The sanctioned staff at the end of the year numbered 386 (as against 331 in 1927). We gather that there is a considerable shortage of assistant engineers in possession of suitable engineering degrees straight from the universities, or even part-trained. This necessitated the taking on of untrained staff.

School of Architecture, Auckland.

The Prospectus for 1930 of the School of Architecture, Auckland University College, which is part of the University of New Zealand, has come to hand. Founded in 1918, it now provides tuition for 30 full-time students and 40 part-time. The school is housed in splendidly equipped studios in the New Arts Building of University College. The five-year course works up to the Diploma in Architecture with the degree A.N.Z.I.A. The Professor of Architecture is Mr. C. R. Knight, B.A., B.Arch. (Liverpool), A.R.I.B.A. The prospectus is illustrated with some very creditable designs by students.

Lifting Appliances.

A memorandum on Chains and Other Lifting Appliances (H.M. Stationery Offices, 2s. net) is a thorough revision of a previous memorandum of 1915, which dealt with the causes of, and possible means of preventing, accidents arising from the fracture or failure of chains and such metal appliances as rings, hooks, swivels, shackles, etc., used for lifting purposes. Specification of materials, strength, etc., is gone into at length, and also the kinds and proportions of the pieces. The reading of this publication should be the duty of every engineer and contractor who supervises or employs hoisting plant.

Architects and Builders in China.

The fifth issue of the China Architects' and Builders' Compendium (published at Shanghai and edited by Messrs. J. T. W. Brooke, A.R.I.B.A., and R. W. Davis) is a fund of information for the architect in that Eastern land. General information on land, property and building with regard to local customs and habits and technical information on costs and price-lists is collated in a manner most easy of access. What we should not find so easy of mastering are the Chinese land measures. We can fathom that the Poo may measure 5 ft. 6 in., but to remember that the Paorshan Mow = .909 Shanghai Mow is too great a strain!

NEW CINEMAS

Amersham.—The R.D.C. has passed plans for alterations to the "Regent" Cinema.

Bristol.—As announced in our issue for January 3, a new cinema is shortly to be built which will provide accommodation for about 1,140 people. Messrs. P. Monro, Son & Pearce, of 6, St. Stephen's-avenue, Clare-street, Bristol, are the architects.

Dublin.—Plans for alterations to the Grand Central Cinema, for the Irish Kine. Co., (1920), Ltd., have been passed by the City Architect.

Falkirk.—Plans have received the approval of the Dean of Guild Court for the £12,000 reconstruction work proposed at the Grand Theatre, Vicar-street, Falkirk, for the Associated British Cinemas, Ltd., of Heddon House, Regent-street, London W. Plans have been prepared by Mr. W. R. Glen, architect, of 164, Bath-street, Glasgow.

Liverpool.—We learn that the contract for the new cinema at Stanley-road and Falstaff-street, for Mr. G. H. Platt, has been given to Messrs. G. Platt & Sons, Ltd., of Liverpool. The architects are Messrs. Gray & Evans, 51, North John-street, Liverpool.

Oxted.—A provisional contract for the cinema and blocks of shops and flats proposed on a site at Station Approach has been placed with Mr. E. H. Smith, of 48, Wellesley-road, Croydon. The new cinema is to seat 600 people. Plans have been prepared by Messrs. H. F. Murrell and R. M. Pigott, FF.R.I.B.A., of 44, Bedford-row, W.C.1, working in conjunction with Mr. R. S. Cockrill, A.R.I.B.A., of 12, Norfolk-street, Strand, W.C.2.

Salford.—A syndicate has put forward a scheme to provide Salford with a first-class "talkie" cinema to seat 1,500. The promoters are to place details before the Building and Bridges Committee shortly.

Architectural Stone Dressings.

A leaflet issued by the Allied Arts and Crafts Guild, of Chandos House, Buckingham-gate, S.W.1, and Charlotte-street, Birmingham, draws attention to four recent buildings on which the Guild's "Guildstone" dressings have been used. These buildings are the Beaufort Cinema, Meriden, and three schools, of which the Chichester example is probably the most important. The Guild are, we believe, specialists in architectural "Guildstone" dressings of every description.

TENDERS

Communications for insertion under this heading should be addressed to "The Editor," and must reach him not later than Tuesday evening.

* Denotes *accepted*.
† Denotes *provisionally accepted*.
‡ Denotes *recommended for acceptance*.
§ Denotes *accepted subject to modifications*.
¶ Denotes *accepted by H.M. Office of Works and H.M. War Office*.

Altrincham.—Additions to the Town Hall, for the U.D.C. Mr. F. H. Brazier, A.R.I.B.A., architect, 7, Market-street:—

*Martin Stone & Sons, Altrincham ... £6,750

Barnsley.—Shops and premises in Eldon-street and Queen-street, for Messrs. Montague Burton, Ltd., Hunslet Mills, Leeds. Mr. Harry Wilson, architect, 81, North-lane, Roundhay, Leeds:—

*W. Johnson & Son, Wombwell, near Barnsley.

Barton-upon-Irwell.—Additions to the Hospital, for the B.G. Messrs. Elcock & Sutcliffe, architects, 21, Northumberland-avenue, W.C.2:—

*J. Chapman & Son (Patricroft), Ltd., Green-lane, Patricroft.

Bingham.—For erection of four parlour-type houses at Whatton, for the R.D.C.:—

*H. Doubleday, Bottesford.

Birmingham.—Reconstruction in mass concrete and steel of bridge over the canal arm in George-street, between the Parade and Newhall-street, for the T.C. Mr. H. H. Humphries, City Engineer and Surveyor:—

*J. Wilson & Sons, 117, Dale-end, Birmingham

Blackpool.—Alterations and improvements to the "Trocadero Hotel," Central Beach:—

*Sir Lindsay Parkinson & Co., Ltd., Talbot Saw Mills, Talbot-road, Blackpool.

Blackpool.—Painting of municipal houses, for the C.B.: (*a*) Watson-road estate; (*b*) Claremont estate; (*c*) Central and Marton section; (*d*) Southerly section; (*e*) Northern section:—

(*a*)—*G. J. Deakin, Blackpool.
(*b*)—*A. J. Watson, Blackpool.
(*c*)—*A. J. Watson, Blackpool.
(*d*)—*S. P. Benson, Blackpool.
(*e*)—*A. Towers, Blackpool.

Brighton.—Elementary school for junior mixed with infant scholars at Hereford-road, for the E.C. Messrs. T. Simpson & Son, architects, 16, Ship-street:—

Limpus & Son, Hove	£12,895
F. T. Wilson & Sons, Brighton	11,286
Bartley & Ward, Ltd., Crawley	11,264
Rice & Sons, Brighton	11,203
J. B. Sharman, Ltd., Ramsgate	11,198
J. Barnes & Sons, Brighton	11,159
Negus, Ltd., London	11,041
Field & Cox, Brighton	11,040
R. Cook & Sons, Crawley	10,899
James Bodle, Ltd., 4, Grand-parade, Brighton	10,769

Calne.—20 houses at Honey Garston, for the T.C. Mr. T. V. Oliver, Borough Surveyor:—

*C. Syms & Sons, 132, London-road, Calne ... £6,700

Carlton (Notts).—New church to replace the existing church of the Sacred Heart in Main-street, for the Reverend John Toomey. Messrs. Fosbrooke, Bedingfield & Grundy, F.R.I.B.A., architects, 1, Museum-square, Leicester:—

*F. J. Bradford, Leicester.

Carmarthen.—Alterations and improvements to the "Angel" Hotel, Lammas-street. Mr. A. Crabb, architect, Bank-chambers, Lammas-street:—

*Isaac Richards & Sons, St. David's-avenue, Carmarthen ... £968

Chelmsford.—Temporary office, for the Essex C.C. Mr. W. H. Morgan, architect, Old Court, Springfield:—

*Mace & Son, Chelmsford ... £266

Crowle.—36 houses on the Crowle Wharf site, for the U.D.C.:—

*Goates & Co.

Dublin.—Extensions to the building of the Municipal Technical Institute in Bolton-street. Mr. T. Horace O'Rourke, architect, Exchange-buildings, Lord Edward-street:—

*Collen Bros., Ltd., Hanover-street, Portadown ... £14,670

Essex.—Construction of the Stanford-le-Hope by-pass, for the C.C.:—

*W. & C. French, Buckhurst-hill ... £67,781

Farrybridge.—Rebuilding of the "Fox Inn" public house, for the Tower Brewery Co., Ltd. Messrs. Garside & Pennington, architects, 45, Ropergate, Pontefract:—

*Matthews & Sons, 11, Railway-street, Marsh-lane, Leeds.

Fleetwood.—Extension and widening of the Fish Stage sheds, the provision of a new Klondyke shed, buffet, etc., in connection with the Fleetwood Dock Extension, for the L.M.S. Railway. Chief Engineer, Euston Station, N.W.1, architect:—

*Thos. Wrigley, Ltd., Manchester.

Friern Barnet.—Coal bunkers at the casual wards and at the Institution, for the U.D.C.:—

*F. C. Slough ... £330

Gomersal.—Electricity transformer chamber, for Messrs. Burnley & Co. and the Yorkshire Electric Power Co., Ltd. Mr. P. T. Runton, architect, Bradford:—

Masons—*M. Booth & Sons
Asphalters—*Tunstall's Rock Asphalte Co., Ltd.

Hazel Grove and Bramhall.—Erection of a transformer sub-station at the junction of Broadway and Sandiway, Bramhall, for the U.D.C. Mr. B. Waterhouse, F.M.S.A., architect, 170, Edgeley-road, Stockport:—

*W. Vernon, Stockport ... £875

Hazel Grove.—Erection of public conveniences at (*a*) Hazel Grove; (*b*) Bramhall, for the U.D.C. Mr. G. S. Doncaster, Surveyor:—

*Oldham & Hallworth, Hazel Grove, near Stockport ... (*a*) £927
(*b*) 657

Ilkley.—22 non-parlour type houses on the Leeds-road-Wheatley-lane site, for the U.D.C. Engineer and Surveyor. Plans, specifications, etc., by Mr. A. Skinner, architect to the Housing Committee:—

*P. Rhodes, Ltd., Park View Works, Cardigan-lane, Leeds.
(Subject to approval by M. of H.)

Ilminster.—Three houses at "The Crescent," for the U.D.C.:—

*W. E. Relleen, West-street, Ilminster £1,269
(In lieu of tender withdrawn.)

Leeds.—Reinforced concrete dairy produce distributing centre and offices at Springwell-road, for the Industrial Co-operative Society, Ltd.:—

*Co-op. Building and Works Department.

Leicester.—Pavilion and other buildings at the Leicester Abbey Grounds, for the Corporation. Mr. A. T. Gooseman, City Surveyor:—

*F. Elliott, Leicester ... £13,999

Lewes.—Alterations to the sanitary conveniences at Chailey Workhouse, for the B.G. Mr. A. F. Perkins, deputy clerk:—

*C. Pannett & Son, Lewes ... £166 10

Liverpool.—Reconstruction of the buildings at the corner of Lord-street and South John-street, Liverpool, for Messrs. Oldfield's, Ltd. Mr. A. Thomas, architect, Royal Liver-buildings, Pier Head, Liverpool:—

*W. Tomkinson & Sons, Liverpool.
Steelwork—*McIntyre & Sons, Liverpool.

Liverpool.—Bank premises on the corner of Church-street and Williamson-street, for Lloyds Bank, Ltd., Gracechurch-street, E.C.2. Mr. Herbert J. Rowse, F.R.I.B.A., architect, 305, India-buildings, Water-street, Liverpool:—

*J. Henshaw & Sons, Liverpool.

London.—Rebuilding of the "Cock" public-house, Mare-street, Hackney, for Messrs. Truman, Hanbury, Buxton & Co., Ltd. Mr. Arthur E. Sewell, architect, 91, Brick-lane, E.1. Quantities by Mr. William Gilbert, 74, Broad-street-avenue, E.C.2:—

Douglasse Haine & Co	£8,438
Henry Knight & Son	8,270
Harris & Wardrop	8,176
Snewin Bros. & Co.	7,993
George Barker	7,827
H. V. Clogg	7,787
*Schooley & Son	7,772
Surveyor's estimate	7,860

¶**London.**—The following contracts have been entered into by H.M.O.W. Department during the week ended the 11th instant:—

Ashton-on-Ribble Telephone Exchange—erection—Croft & Sons, Ltd., Blackpool-road, Preston.
Belfast Law Courts—hot and cold water and steam services—G. N. Haden & Sons, Ltd., Lincoln House, 60, Kingsway, W.C.2.
Coventry Employment Exchange—steel casements—G. Wragge, Ltd., Clock House, Arundel-street, W.C.2.
Mount Pleasant Letter Office—foundation work—Tileman & Co., Ltd., 7-8, Norfolk-street, Strand.
Matlock Post Office—alterations and additions—F. A. Roberts, Woodside, Matlock.
Hampstead Telephone Exchange—steel casements—Humphries, Jackson & Ambler, Ltd., Hawkins-street, Cornbrook, Manchester.

¶**London.**—Tenders accepted for December last by H.M. Air Ministry:—

BUILDINGS AND WORKS SERVICES.

Artificers work—Aldergrove—J. Miskimmin & Sons, Ltd., Belfast; Duxford—Arthur Carter (London), Ltd., Luton; Larkhill and Netheravon—James & Crockerell, Salisbury.
Meteorological Office, Felixstowe—W. F Cross, Ltd., Felixstowe.

London.—Adaptation as a Council school for junior mixed and infant children, of the premises formerly occupied by the Wilberforce C.E., for the L.C.C.:—

		(a)	
C. H. Boyd & Son, Ltd. ...	£5,340	+ £89	0
G. Godson & Sons, Ltd	5,077	+ 75	0
W. E. Greenwood & Son, Ltd.	5,015	+ 76	15
Stevens & Sons	4,966	+ 80	0
W. Daley & Co., Ltd.	4,649	+ 105	0
G. N. Watts, Ltd	4,763	+ 45	0
J. & C. Bowyer, Ltd.	3,987	+ 55	0
Triggs & Co., Ltd.	3,978	+ 38	0
W. J. Dixon & Sons	3,957	— 9	0
A. & F. Polden, Ltd.	3,912	+ 72	0
W. H. Cooper & Son, 201, Hammersmith-road, W.6 ...	3,700	+ 69	0

Architect's estimate, £4,184.

(All of London.)

(a) Alternative tender for providing "Plasin" instead of brick partitions.

Loughborough.—Provision of 6 additional filter beds at the Sewage Disposal Works, for the T.C.:—

*Wm. Moss & Son, Ltd., ... £2,996

Manchester.—Mortuary at Ancoats Hospital, Mill-lane, for the Board of Management. Messrs. Thomas Worthington & Sons, FF.R.I.B.A., architects, 178, Oxford-road:—

*W. Thorpe & Sons, Ltd., Manchester.

Manchester.—Additions to warehouse in Richmond-street and Princess-street, Manchester, for J. Moston & Sons. Messrs. Halliday & Agate, A. and L.R.I.B.A., architects, 14, John Dalton-street:—

*C. H. Normanton & Sons, Ltd., Manchester.

Manchester.—School buildings, Burlington-street, Greenheys, for the Managers of the Holy Name Schools. Messrs. W. Telford Gunson & Sons, L.R.I.B.A., architects, 10, Marsden-street:—

*W. Gornall & Sons, Ltd., Salford.

Manchester.—Factory in Trafford Park, to accommodate 2,000 workpeople, for I. Freedland, Church-street, Cheetham. Messrs. Halliday & Agate, A. and L.R.I.B.A., architects, 14, John Dalton-street:—

*S. & J. Smethurst, Ltd., Oldham.

Middlesbrough.—Culvert, approx. 130 yds., and bridge works, at the North Ormesby main classified road, etc., for the C.B. Mr. S. E. Burgess, Borough Engineer. Quantities by Borough Engineer:—

*John Pearson, Ltd., Stainton-in-Cleveland.

Minehead.—35 cottages at Alcombe, for the U.D.C. Mr. A. Douglas Barron, architect, Surveyor's Office, The Parade:—

†Minehead Building and Construction Co., Ltd., Friday-street, Minehead ... £12,496
(Subject to the M.H. approval.)

Rathdown.—Laying down water supply to the districts of Ballyedmonduff, Woodside and Barnacullia, etc., for the R.D.C. Mr. P. H. McCarthy, M.Inst.C.E.I., engineer, 26, Lower Leeson-street, Dublin:—

Fleming Bros., Dublin	£5,964 0
McNally & Co., Dublin	5,899 0
Geo. Tracy, Co. Dublin	4,854 7
South of Ireland Asphalt Co., Dublin	4,515 16
P. Blake, Dublin	4,302 0
Wm. Lee, Arklow	4,151 19
Wm. Lacy, Howth	4,091 0
*Daniel Clarke, Selskar House, Ranelagh, Dublin	4,030 11

Reigate.—New garage front, for Mr. G. A. Hodgkins, London-road, Reigate. Mr. Lawrence Kennard, architect:—

*A. Edmonds & Co., Ltd., Constitution-hill, Birmingham.

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Rochdale.—Reconstruction of showrooms, installing new windows, etc., in Drake-street, for Messrs. Iveson Brothers. Mr. Thomas Townend, F.R.I.B.A., architect, District Bank-chambers, Fleece-street, Rochdale:—

*W. Ross & Sons, Oldham.

Rochdale.—Structural alterations to Hamer and Royds-st. police stations, for the C.B. Mr. S. H. Morgan, Borough Surveyor, Town Hall, Rochdale:—

*Robert Blincoe, Rochdale.

Ruabon.—School at Acrefair, for the Denbighshire E.C. Mr. W. D. Wiles, County Architect, Acton Hall, Wrexham:—

*Lowe & Sons, Curzon-street, Burton-on-Trent £16,679

Ruislip-Northwood.—Painting Council houses at Coteford-close and Clack-lane, Ruislip, for the U.D.C.:—

*Universal Housing Co. £362 10
(In lieu of tender withdrawn.)

Sheffield.—Erection of a transformer sub-station in Woodseats-road, Sheffield, for the Electricity Supply Committee:—

*H. Knowles & Sons, Sheffield.

Sherburn.—4 houses, for the R.D.C.:—

*B. Fell & Sons £1,410

Sittingbourne.—Alterations and additions to the public conveniences at the Town Hall, for the U.D.C.:—

*E. Bishop & Sons, Ltd., 10, Albany-road, Sittingbourne £565

Sittingbourne.—Iron fencing and ornamental gates to Chilton playing field, for the U.D.C.:—

*H. S. Tett & Co., Ltd. £574 2 6

South Shields.—Alterations and improvements to the Garden Gate Hotel, South Shields, Messrs. T. A. Page & Son, architects, 38, King-street, South Shields:—

*W. Pawcus & Sons, South Shields.

Stockport.—118 houses on the Municipal housing estate, at Criterion-street, North Reddish, for the T.C. Mr. H. Hamer, Borough Surveyor:—

*T. Davies & Son, Stockport.

Stoke-on-Trent.—New nurses' home at the London-road Institution, near Newcastle-under-Lyme, with accommodation for 179 beds, for the Stoke and Wolstanton Union. Mr. W. Pendleton, architect, Union Offices, Stoke-on-Trent. Quantities by Messrs. Hobson & Withington, Manchester:—

*Palin Brothers, Stoke-on-Trent £45,232

Wakefield.—Two sanitary annexes at the Wakefield Mental Hospital, for the West Riding Mental Hospitals Board. Mr. W. E. H. Burton, architect and engineer, Wakefield:—

*G. Crook & Sons, Ltd., Henry-street, Wakefield £3,053 19 10

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Wexford.—Reconstruction of the courthouse and county offices, for the Wexford C.C. Mr. W. F. Barry, County Surveyor, Fortview, Wexford:—

J. Hearne & Son, Ltd., Waterford	£10,255 7 4
R. H. Nolan, Waterford	9,300 0 0
Jas. Beckett, Ltd., Dublin	8,400 0 0
M. O'Connor, Wexford	8,056 10 6
*McNally & Co., Ltd., East Wall, Dublin	7,551 0 0
Alexander Hull & Co., Dublin	7,267 10 8

Wolverhampton.—Transformer house, for the T.C.:—

*A. M. Griffiths & Son, Ltd., Thomas-street, Wolverhampton £490

Yeadon.—New church vicarage:—

*A. J. & L. Cooper.

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